



Cadastral Data Content Standard for the National Spatial Data Infrastructure

VERSION 1.3 – Third Revision

Subcommittee on Cadastral Data
Federal Geographic Data Committee

May 2003

Federal Geographic Data Committee

Department of Agriculture ? Department of Commerce ? Department of Defense ? Department of Energy
Department of Housing and Urban Development ? Department of the Interior ? Department of State
Department of Transportation ? Environmental Protection Agency
Federal Emergency Management Agency ? Library of Congress
National Aeronautics and Space Administration ? National Archives and Records Administration
Tennessee Valley Authority

Federal Geographic Data Committee

Established by Office of Management and Budget Circular A-16, the Federal Geographic Data Committee (FGDC) promotes the coordinated development, use, sharing, and dissemination of geographic data.

The FGDC is composed of representatives from the Departments of Agriculture, Commerce, Defense, Energy, Housing and Urban Development, the Interior, State, and Transportation; the Environmental Protection Agency; the Federal Emergency Management Agency; the Library of Congress; the National Aeronautics and Space Administration; the National Archives and Records Administration; and the Tennessee Valley Authority. Additional Federal agencies participate on FGDC subcommittees and working groups. The Department of the Interior chairs the committee.

FGDC subcommittees work on issues related to data categories coordinated under the circular. Subcommittees establish and implement standards for data content, quality, and transfer; encourage the exchange of information and the transfer of data; and organize the collection of geographic data to reduce duplication of effort. Working groups are established for issues that transcend data categories.

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Preface to Version 1.3

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This review draft version reflects comments and changes received through May 2003.

The Subcommittee on Cadastral Data thanks the agencies and individuals that contributed to the content and reviews of this standard and welcomes additional input and participation

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1. Introduction

The Federal Geographic Data Committee was established by Office of Management and Budget Circular A-16 to promote the coordinated development, use, sharing, and dissemination of geographic data.

The Federal Geographic Data Committee is composed of representatives from the Departments of Agriculture, Commerce, Defense, Energy, Housing and Urban Development, the Interior, State, and Transportation; the Environmental Protection Agency; the Federal Emergency Management Agency; the Library of Congress; the National Aeronautics and Space Administration; the National Archives and Records Administration; and the Tennessee Valley Authority. Additional Federal agencies participate on Federal Geographic Data Committee subcommittees and working groups. The Department of the Interior chairs the Subcommittee on Cadastral Data.

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1.1 Mission and Goals of Cadastral Data Content Standard

The FGDC Standard Reference Model defines data content standards as standards that provide semantic definitions of a set of objects. Data content standards may be organized and presented in a data model such as an entity-relationship model. The Cadastral Data Content Standard provides semantic definitions of objects related to land surveying, land records, and landownership information.

The mission of the Subcommittee on Cadastral Data for the Cadastral Data Content Standard is:

To provide a standard for the definition and structure for cadastral data which will facilitate data sharing at all levels of government and the private sector and will protect and enhance the investments in cadastral data at all levels of government and the private sector.

Cadastral data are defined as the geographic extent of the past, current, and future rights and interests in real property including the spatial information necessary to describe that geographic extent. Rights and interests are the benefits or enjoyment in real property that can be conveyed, transferred, or otherwise allocated to another for economic remuneration. Rights and interests are recorded in land record documents. The spatial information necessary to describe rights and interests includes surveys and legal description frameworks such as the Public Land Survey System, as well as parcel-by-parcel surveys and descriptions.

The goals for Cadastral Data Content Standard are:

1. To provide common definitions for cadastral information found in public records, which will facilitate the effective use, understanding, and automation of land records,
2. To provide suggested attribute values, which will enhance data sharing,
3. To resolve discrepancies related to the use of homonyms and synonyms in federal land record systems, which will minimize duplication within and among those systems,
4. To provide guidance and direction for land records and land surveying professionals on standardized definitions, which will improve land records, automation, management, and use, and

5. To use participatory involvement in the standard development to reach out to non-federal organizations that will encourage broadly based application of the standard.

1.2 Relationship to Existing Standards

The Cadastral Data Content Standard integrates with existing standards as much as possible. As examples, Federal Information Processing Standards (FIPS) Publications were used where possible. All geospatial metadata requirements for this standard conform to the Federal Geographic Data Committee's Content Standard for Digital Geospatial Metadata FGDC-STD-001-1998

Other interagency standards, such as the US Geological Survey and Bureau of Land Management Public Land Survey System meridian definitions, were adopted where appropriate. This conserved the investment the agencies had in existing automated data and met the requirements of OMB Circular A-119, which mandates the use of existing standards wherever possible. Additionally, many local and state government standards were reviewed for inclusion.

In some cases neither interagency nor intergovernmental standards existed. In these cases The Cadastral Data Content Standard could be adopted for interagency and intergovernmental acceptance and use. The definitions were written to accommodate as many requirements as possible.

There were other cases where there is overlap with other Federal Geographic Data Committee Subcommittees. The need for standards for Geopolitical entities, addresses, agency names, and private organizations are being handled by other FGDC Subcommittees. As other Federal Geographic Data Committee Subcommittees complete standards the linkages will be completed.

This update to the standard, May 2003 Version 1.3 updates the May 2002 Version 1.2 and the April 1999 Version 1.1. This version corrects language, expands definitions and clarifies attributes and suggested domains of values.

1.3 Description of Standard

The Cadastral Data Content Standard forms the basis for automating the legal elements of cadastral data found in public records. The standard defines attributes or elements that are in landownership related documents. It provides suggested domains for many elements and provides an interagency definition for each element. These two standardization efforts, domains and definitions, should increase the uniformity of cadastral records.

The standard does not limit or filter the information that can be included. Cadastral information in the public record is modeled, defined and included. For example many types of legal descriptions such as metes and bounds, subdivision plats and the Public Land Survey System (PLSS) are included in

the model and definitions. This does not mean that every implementation of the standard has to include every entity and attribute; conversely, the standard provides relationships, definitions and attributes to be considered for automation

The standard contains sufficient information to convert record information to a common basis. For example, while it is possible to automate distances that have any unit of measure, the original measurements units must be indicated in a legal cadastre. This requirement adds a significant number of attributes to the standard. Within these added attributes there is an attempt to provide suggested domains of values to support future data conversions and migrations. These suggested domains are by no means an exhaustive list and additional or expanded domains are encouraged. The term suggested domain does not intend to indicate that this is a standardized list of domains.

The rules and specifications for automating cadastral information into the standard depend in part on the information contained in the landownership records. That is, it is not possible to automate information that is not available, but all information that is available could be automated. For example, if a parcel is described in a deed as Lot 2 of Green Acre Subdivision in Badger County and the bearings and distances around the parcel are not included in the deed, then it is not possible to automate the perimeter measurements from this deed.

Other rules for putting data into the standard are based on data integrity. One type of integrity is that information can be referenced to a source document. Another type of integrity maintains the relationships among the entities and attributes. For example, the relationship between parcels and boundaries is a many to many relationship meaning that a boundary can be a part of many parcels and a parcel can have many boundaries.

1.4 Applicability and Intended Uses of Standard

The Cadastral Data Content Standard is intended to support the automation and integration of publicly available land records information. It is intended to be useable by all levels of government and the private sector. The standard contains the standardization of the definition of entities and objects related to cadastral information including survey measurements, transactions related to interests in land, general property descriptions, and boundary and corner evidence data. Any or all of these applications are intended to be supported by the standard.

The intended geographic scope of the standard is all fifty states of the United States including all onshore cadastral as well as marine cadastral information. Applicability of this standard in other geographic areas and business processes, such as the Insular Areas of the United States has not been determined. Additions to this standard for other geographic areas and business processes will be determined through the maintenance procedures described in Section 1.6 of this document.

The standard is not intended to reflect an implementation design. An implementation design requires adapting the structure and form of these definitions to meet application requirements.

The standard can be implemented as either a stand-alone data system for measurement based systems, for transactional information, or as an attribute data system connected to a geographic information system. The standard does not contain the spatial and topological linkages and spatial features required to build and maintain a geographic information system.

1.5 Standard Development Procedures

1.5.1 Participants

The table below lists the members of the Subcommittee on Cadastral Data who participated in the original standard development.

Name	Agency
Linda Brooks	Bureau of Land Management
Patrick Carroll	Fish and Wildlife Service
Michael Domaratz	FGDC Secretariat
Jeff Egan	Tri-Services Technology Center
Theresa Ely	Bureau of Land Management
John Guthrie	USGS National Mapping Division
Paula Langley	Bureau of Land Management
Steve McDevitt	US Army Corps of Engineers
Dennis Moonier	US Forest Service
Yvonne Morehouse	Minerals Management Service
David Moyer	National Geodetic Survey
Richard Naito	Minerals Management Service
Denise Perreca	USGS National Mapping Division
Thomas Phelps	Naval Facilities Engineering
Louise Precosky	Bureau of Land Management
Randy Roberts	US Army Corps of Engineers
Paul Rogers	Minerals Management Service
Gary Speight	Bureau of Land Management
Lee Thormahlen	Minerals Management Service
Margaret Watry	US Forest Service

The Technical Advisory Group was assisted by Nancy von Meyer, Fairview Industries. John Moeller, Bureau of Land Management, chaired the Subcommittee on Cadastral Data during the initial standard development. Don Buhler and Bob Ader co-chaired the Subcommittee during the development of this version.

In addition to these participants, representatives from the National Association of Counties (NACo) and the National States Geographic Information Council (NSGIC) have participated as members of the

Cadastral Subcommittee since the standard development. Current subcommittee members are listed on the web page at <http://www.fairview-industries.com/fgdc-cad.html>

1.5.2 Comments and Reviews

A review was conducted of cadastral and land records related data and data standards from participating federal agencies. This review indicated there was significant duplication in collection activities and inconsistent standards for coding and definitions of cadastral related data among federal agencies. A comparison of the results from the federal agencies and similar information from selected counties indicated that there was a significant volume of cadastral data collected and maintained in local governments that state and federal agencies could use, if there were standards in place.

As the standard developed, draft versions were circulated among federal agencies and interested parties outside the federal government. Articles were published in various land professional and geographic information systems association newsletters describing the standard and asking for input. Open forums were held at several national and regional conferences. Groups consisting of representatives from county government, data conversion businesses, state agencies, and local agencies have participated in follow up seminars and discussions in states from Florida to Alaska. The results of review sessions were incorporated into the standard.

In March 1994 Version 1 of the standard was released for comment and review. Copies were mailed to over 500 potential reviewers from all levels of government, academia and the private sector. Fifty-two responses were received on Version 1 of the Cadastral Data Content Standard. Each response and comment was numbered, read, discussed, and answered. A document was produced summarizing all comments and responses.

In September 1994 Version 2 of the standard was completed and submitted to the FGDC. The FGDC released the document for public comment and announced a review period of January 1995 to May 31, 1995 in the Federal Register. Over 1,000 copies were sent to potential reviewers and numerous requests were served through digital access. Twenty-seven documented comments were received by June 15, 1995. These comments were reviewed and incorporated into the standard.

Subsequent revisions have based on comments generated through implementation and submission of maintenance requests.

1.6 Maintenance of Standard

The Federal Geographic Data Committee, Subcommittee on Cadastral Data will manage the maintenance of the standard described in this document. The United States Department of the Interior - Bureau of Land Management - Geographic Sciences Team currently leads the Federal Geographic

Data Committee Subcommittee on Cadastral Data. The Subcommittee expects a continuing maintenance process that will result in updates to domains of values as needed to meet user needs.

This document is the initial definition of the Cadastral Data Standard. It exists in an environment of rapidly evolving user needs and mission requirements. This standard will, therefore, be revised within 18 months of its initial issue, to incorporate the additions and revisions that are evaluated and validated during the first year of implementation.

Any user of the standard may submit requests for change. Requests shall contain:

- Title
- Date of Submission
- Version number and date of the Standard
- Page reference
- A description of the problem (with an example, if possible)
- The suggested change (with an example of its application)
- Point of contact (name and address)

Requests shall be made to the FGDC Subcommittee on Cadastral Data. A World Wide Web site accessible through the FGDC Home Page and Cadastral Subcommittee Home Page will contain a form to assist with writing change requests. <http://www.fairview-industries.com/fgdc-cad.html>

This version of the standard reflects changes that have been submitted through the maintenance process, enhancements that have been identified through implementation, and verification of relationships through extensive testing.

1.7 Level of Compliance

The Cadastral Data Content Standard contains definitions of entities and attributes (with suggested domains of values) and relationships among attributes in the form of a logical data model. This model is a means of expressing the definition and relationship standards for cadastral data. The intent of the Standard is to provide a consistent and uniform means of communicating cadastral information in support of NSDI.

The definition of compliance to a logical data model is nearly impossible because the measure of compliance has to do with how well a physical deployment matches a specific design. In the case of this standard, the data standard should be used in conjunction with business processes and decision support needs. For example, in some jurisdictions there are multiple monuments at corners while in other locations significant effort has been committed to establishing and maintaining a single monument for any

corner. In these two cases, the first will use the three entities as described in this standard for a corner while the second would be able to collapse these three entities into one.

The difficulty of defining compliance can also be seen in the domains of values. These are listed as suggested domains in this standard but clearly every jurisdiction will have their own domain of value needs.

The third compliance area might be the relationships among the various entities. Because this is a content standard with definitions and “true” or definitional relationships, the physical deployment of this standard will require denormalization for the effective operation of applications and the efficient management of data elements on a physical database.

Therefore, compliance with this standard is based on whether the definitions and logical content of the physical data matches the intent and definitions of the standard. For example, if a system contains record boundary information, does that information correspond to definitions of record boundary in the standard? This is a semantic test to ascertain that the definitions of entities in a physical model reflect the intent and definition of the entities in the standard. This is not an indication of a one to one match; it is a definitional and intent check.

To support implementation, the Cadastral Subcommittee has developed standard abbreviations that can be used in all databases and applications. The abbreviations are six letters or numbers in length and are unique. The document containing the abbreviations is listed with this standard document on the subcommittee’s web page.

2. Diagram Conventions - Introduction

The Cadastral Data Content Standard in this document is shown as an entity relationship diagram. Entity relationship diagrams illustrate the entities, their attributes, and their associations or relationships.

The diagrams are not intended to be implementation as data models. Implementation requires modifying the data model to best fit the operating software. This process is called *denormalization* and is the process of combining entities into tables in a database that optimize the database operation.

The diagrams describe the definitions or semantics of cadastral information. Entity relationship diagrams are a shorthand method for showing the associations or relationships among various objects and hence the definitional relationships of the objects or features. The diagram conventions for the entity relationship diagram in the Cadastral Data Content Standard are described in the following sections.

2.1 Reading the Diagrams

The entity relationship diagram illustrates three components of an object definition: Entities, Associations, and Cardinality. All three are important to the semantic definition of the object in the standard.

2.1.1 Entities

A data entity is any object about which the organization chooses to collect data. Attributes are additional information about the entity. Entities and their attributes are defined in a data dictionary.

Data entities are shown in boxes on the entity relationship diagram. In the Cadastral Data Content Standard the entity name is underlined and is the first item listed in the box. The entity attributes are listed below the entity name. The entities and their attributes are defined in Part 3 of the Standard.

2.1.2 Associations

Associations describe how the data entities are related to each other. The associations in the data model for this Standard are: one-to-one, one-to-many, and many-to-many.

One-to-one association (1:1) means that, at a point in time, a given value of A has one and only one value of B. For example, one person has one social security number. The person and their social security number is a one-to-one association. Most one-to-one associations are described as a unique attribute of an entity.

One-to-many association (1:m) means that, at a point in time, item A could have an arbitrary number of items C associated with it. For example, a geodetic control mark may have many names or mark identifiers, such as the name stamped on the cap and location identifiers in a database. In this case the geodetic mark has a one-to-many association with its names and identifiers.

Many-to-many associations (m:m) occur when, at a point in time, a given value is associated with many other values and the converse is also true. For example, one parcel can be located in many administrative districts such as fire, police, school, and emergency response. Conversely, one administrative district is composed of many parcels.

Figure 2-1 illustrates the three associations described above. In Figure 2-1 the "crows foot" symbol indicates many and the single line indicates one.

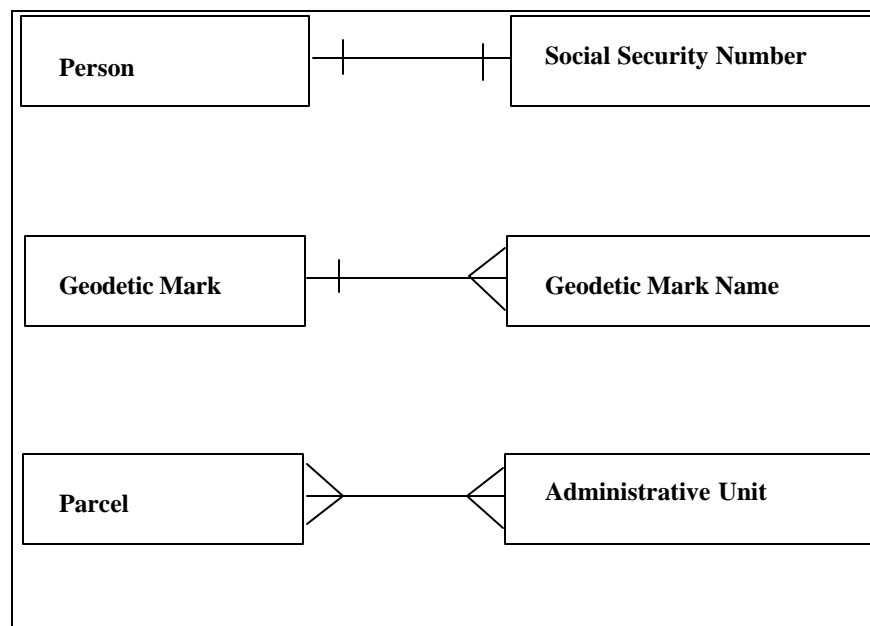


Figure 2-1 - Entities and Associations

2.1.3 Cardinality

Cardinality in the context of this document means whether the association between the two entities is mandatory or optional. For example, a forest must have more than one tree, but a tree may be in a forest. Cardinality is the must and may. *The cardinality aspects of the data model are shown as a circle for optional and a line for mandatory.* The association between a forest and a tree with the cardinality is shown in Figure 2-2.

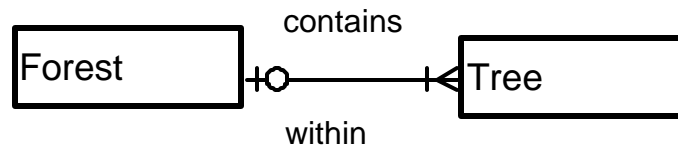


Figure 2-2 - Cardinality Example

In Figure 2-2 a line has been added to the many symbol and a circle has been added to the single symbol. The associations and their cardinality are read in a clockwise manner, which means the associations in Figure 2-2 are read as:

One tree may be within a forest.

One forest must contain many trees

The cardinality and association symbols used in the Standard are shown in Figure 2-3.

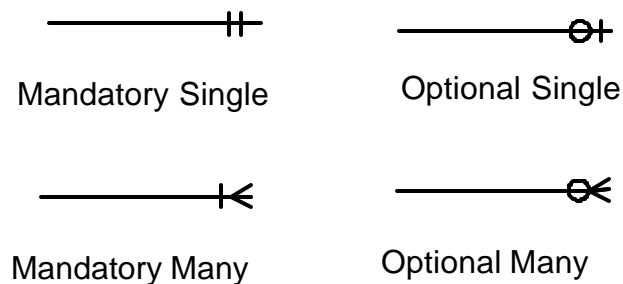


Figure 2-3 - Cardinality in the Standard

2.2 Attributes

Attributes are the properties and characteristics of entities. These are listed in the box with the entity name. In many entities the first attribute has a name that ends with an ID, such as Forest ID. This is an attribute that serves as an identifier for each unique record or entry in the entity and is called a *primary key*. An example of a completed model with the attributes is shown in Figure 2-4. To conform to the conventions described by the Geospatial One Stop initiative, a primary key assigner has been added to the main features or entities. This attribute contains the agency, organization or jurisdiction that assigns and maintains the primary key. Combining the assigner designation with the primary key, should achieve a nationally unique key.

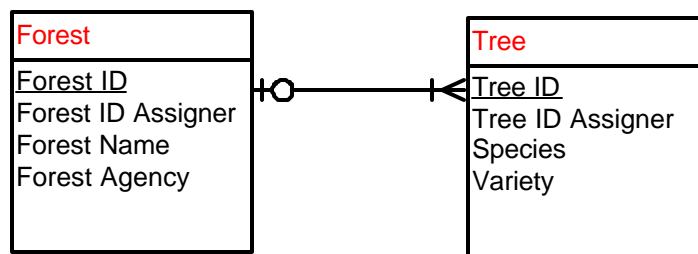


Figure 2-4 - Completed Data Model Tree and Forest

Another kind of attribute is a *foreign key*. A foreign key is a primary key from another entity that points to a record in the related entity. For example, Corner ID may be a primary key for an entity Corner and Boundary ID a primary key for an entity Boundary as shown in Figure 2-5. The intersecting entity or relationship between Corner and Boundary is shown in Figure 2-5 as the entity Corner Boundary. Within Corner Boundary are two foreign keys. The first is Corner ID that points to an entry in the Corner entity and the other is Boundary ID that points to an entry in Boundary. Again, this is shown in Figure 2-5. The entity Corner Boundary describes which corners are attached to which boundaries.

Note on foreign keys – The foreign keys are shown on the entity relationship diagram and are documented in the descriptions in this document. Foreign keys may not be needed in an implementation particularly in a geographic information system where relationships can be determined through spatial discovery and in a geographic information system or an object based system.

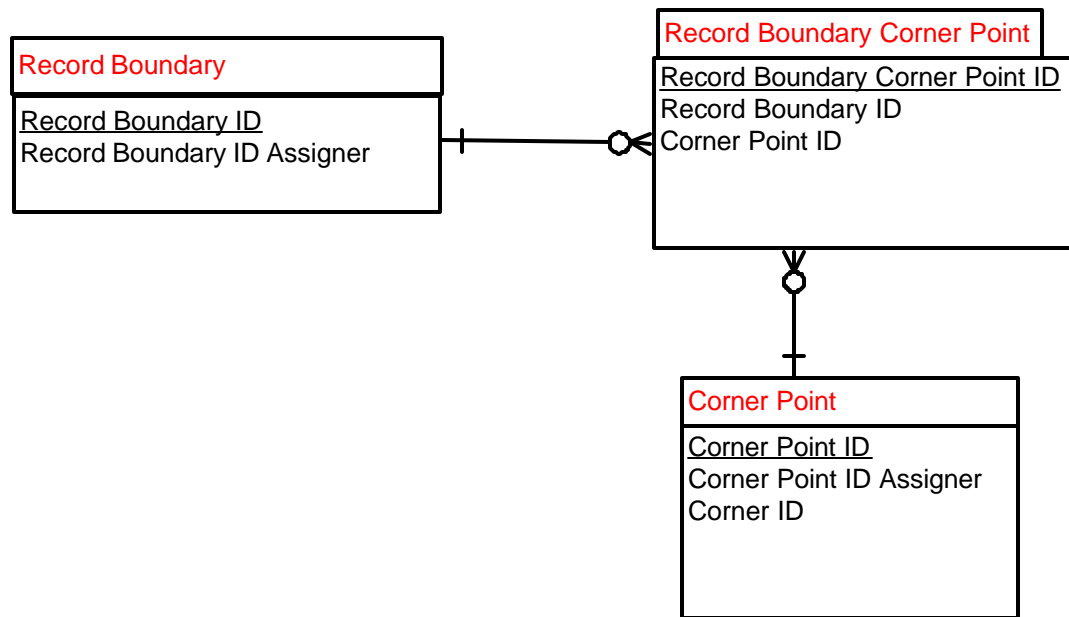


Figure 2-5 - Primary and Foreign Keys

3. Entities and Attributes - Introduction

This section describes the definitions for the entities and attributes in the Content Data Standard. Each entity has a definition and an accompanying set of attributes. The attributes have a definition and a suggested list of domain of values.

The suggested domain of values does not include codes and minimizes the use of abbreviations. Abbreviations are only used for cardinal directions, such as N for North. In a physical implementation of this standard an organization may chose to use abbreviations or codes. The suggested domain of values provides a checklist for implementation and supports the definition of the attributes. In some cases, such as principal meridian, the standard provides the complete list of all known principal meridians with their legal name.

A supplementary informative annex for Federal Domain of Values is provided for some suggested domains in the standard.

An index for attributes is provided at the end of this section.

3.1 Entity Relationship Diagram

Figure 3-1 is a four-part entity relationship diagram for the entity and attribute definitions. The standard diagram has been broken into four parts to provide a more readable diagram in this document. Part 2 of the Standard describes how to read and understand the entity relationship diagram convention used in Figure 3-1. The diagrams in Figure 3.1 are also included in separate image documents on the Subcommittee web page. (<http://www.fiarview-industries.com/fgdc-cad.html>)

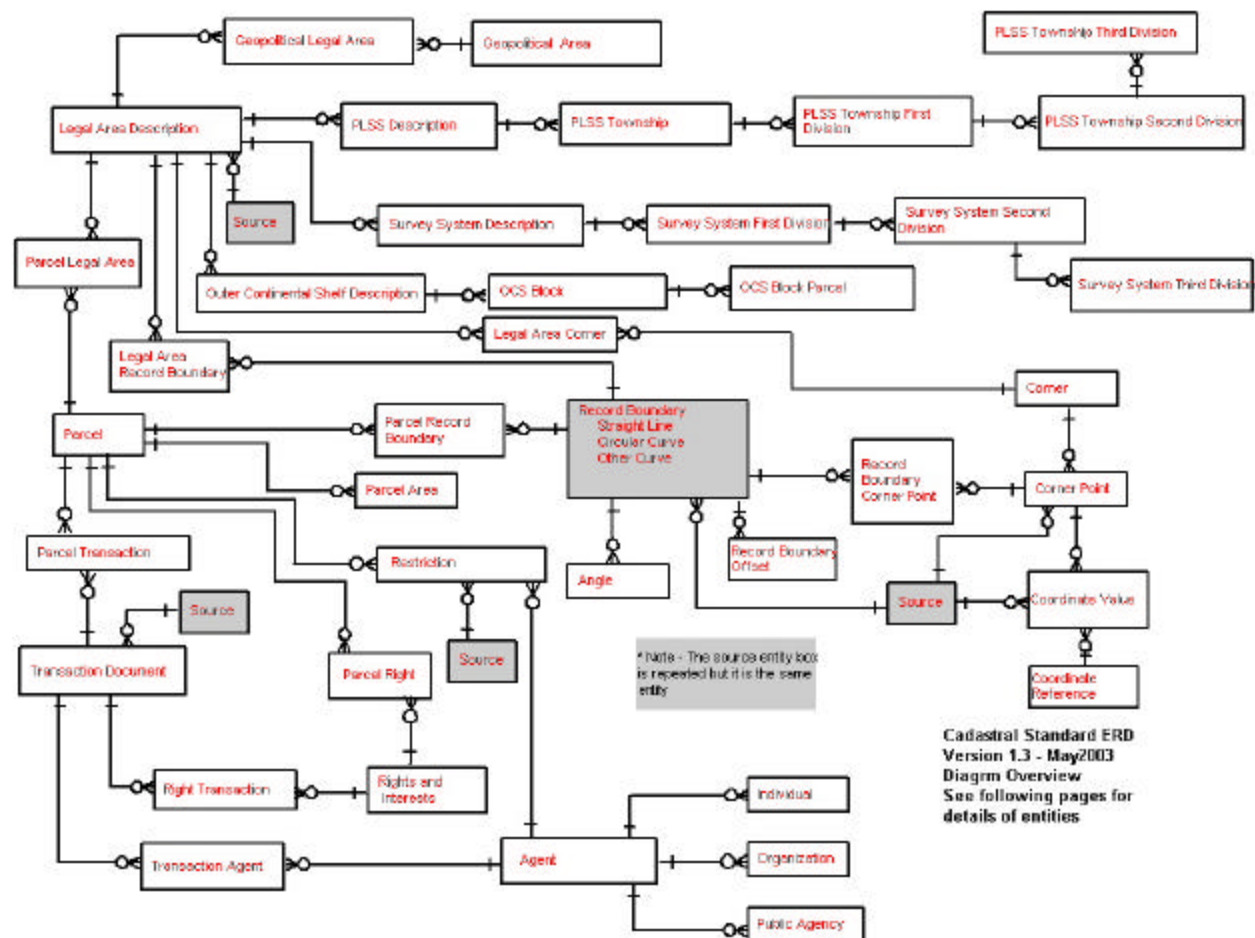


Figure 3-1 - Entity and Relationship Definition Standard Entity Relationship Diagram - Overview

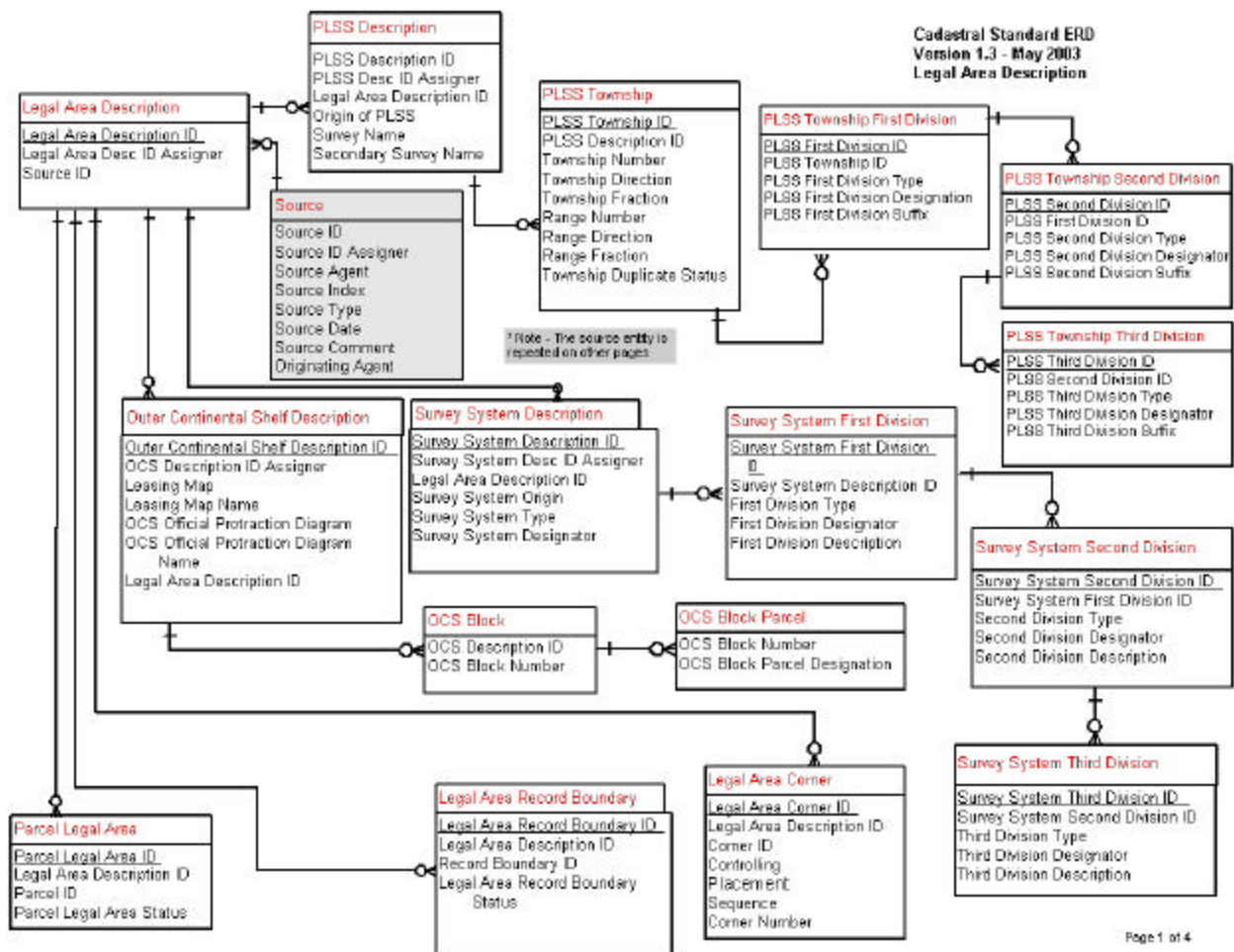


Figure 3-1 Part 1 - Entity and Relationship Definition Standard Entity Relationship Diagram

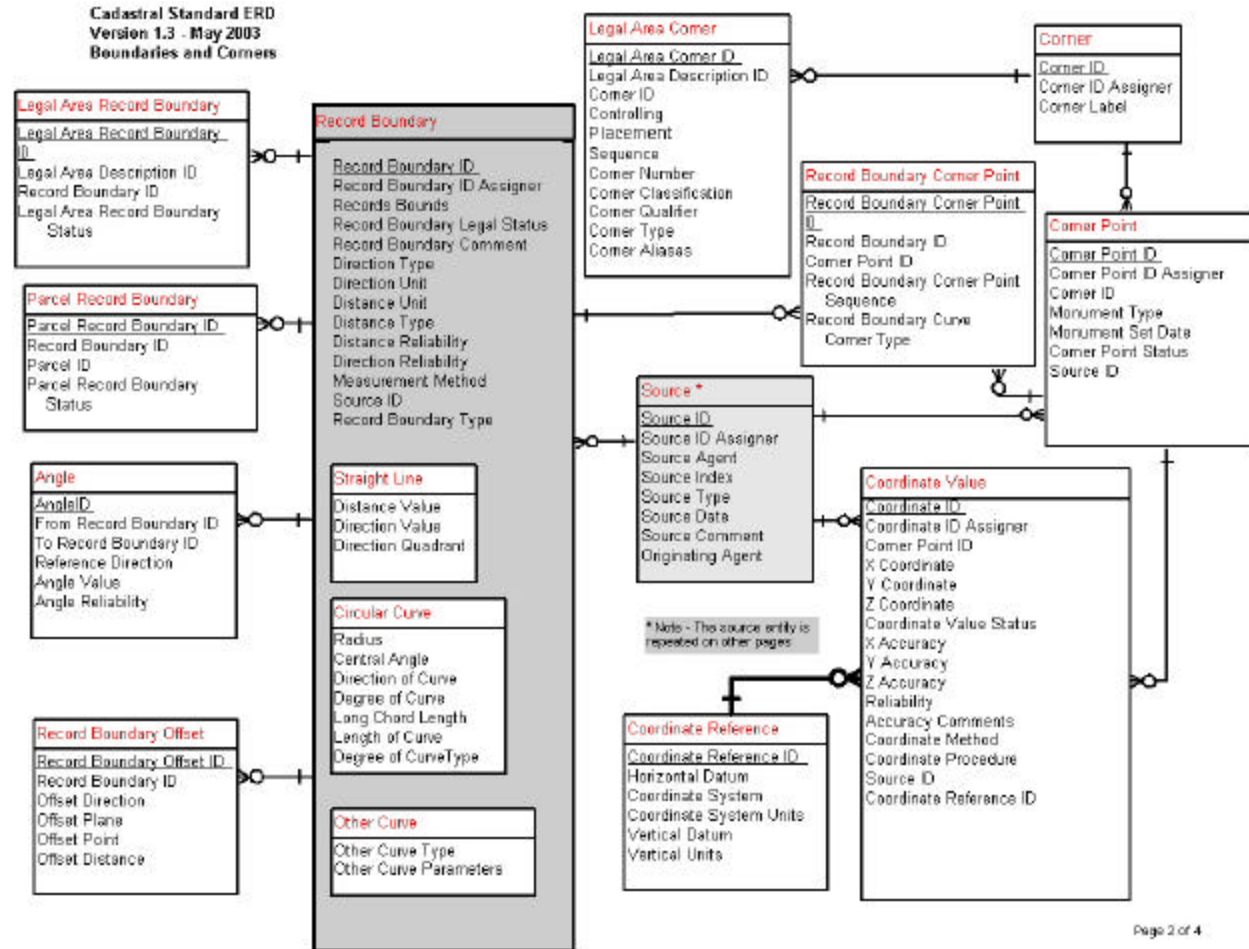


Figure 3-1 Part 2 - Entity and Relationship Definition Standard Entity Relationship Diagram

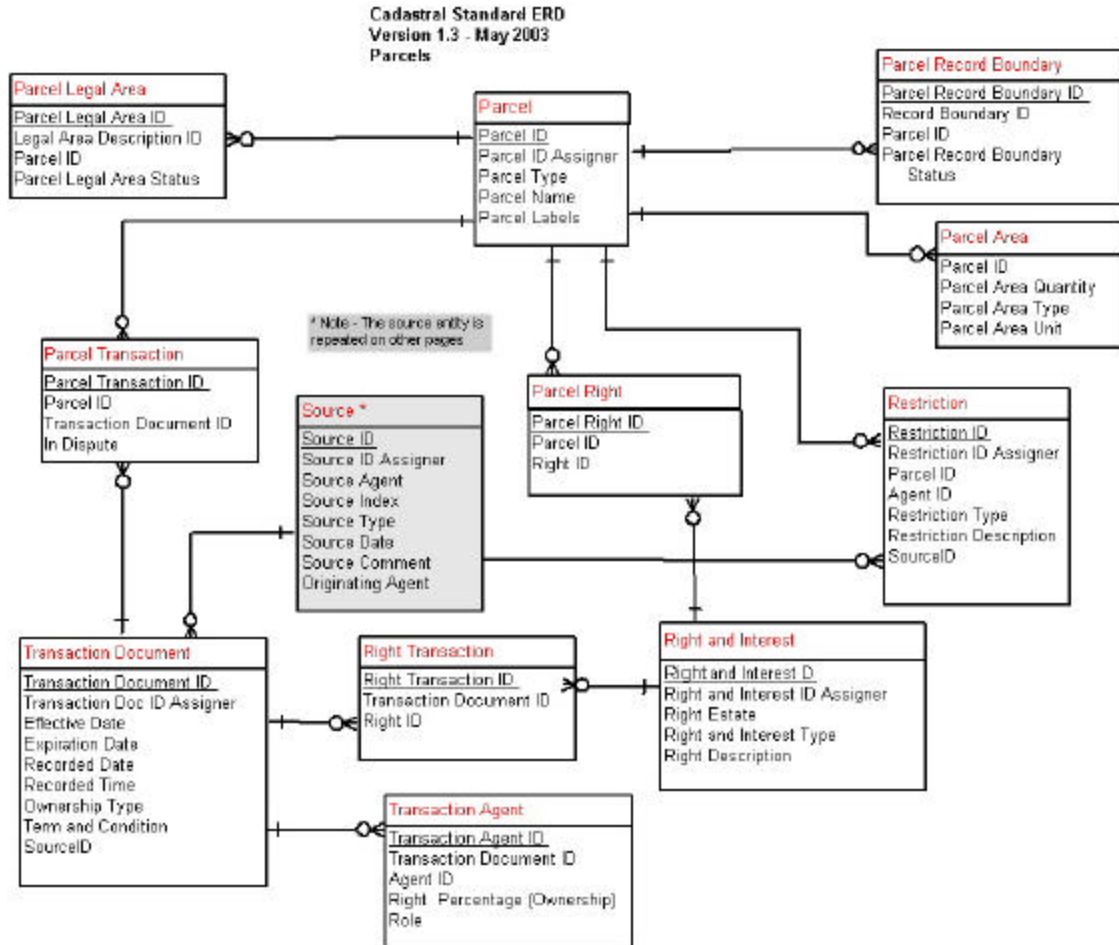


Figure 3-1 Part 3 - Entity and Relationship Definition Standard Entity Relationship Diagram

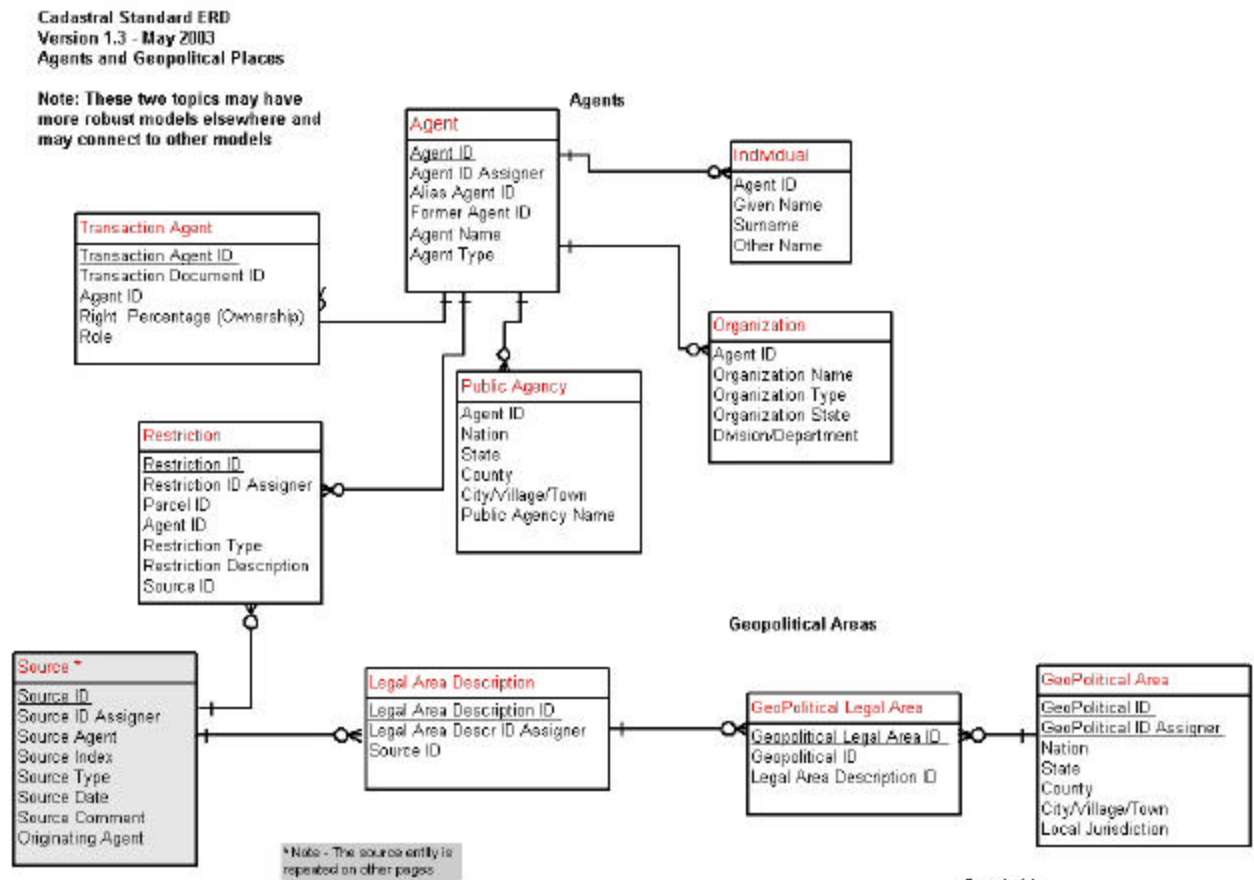


Figure 3-1 Part 4 - Entity and Relationship Definition Standard Entity Relationship Diagram

3.2 Entity and Attribute Definitions

The Entity Relationship Diagram in Figure 3-1 illustrates the relationship among the attributes and entities in the Cadastral Data Content Standard. The following list is in alphabetical order by entity name. It contains definitions for entities and attributes as well as a suggested domain values for some attributes.

In the implementation of this standard it is suggested that null or void entries for attributes be avoided, i.e. if an attribute has a value, the value should be entered. There are implementations where not specified means that the attribute has a value, but no value has not been filled in because it is not known. It is also possible to have a not applicable value for an attribute, which means this attribute is not applicable to this instance of the entity. This implementation is often used when to clarify why an attribute value is null. The Origin of Public Land Survey System has two unique attribute values of not applicable and unspecified. These are included in this domain list to be compliant with existing information at the United States Geological Survey.

The references for definitions are noted. If there is no citation, the Subcommittee on Cadastral Data used a variety of agency and non-agency publications to derive a common definition. All references used for these definitions are included in the list of references.

Acronyms and initials have been removed as much as possible from all definitions. The exceptions are OCS for Outer Continental Shelf in the entity relationship diagram and OPD for Official Protraction Diagram. These initials were used since the people using this data are familiar with these identifications and the diagram size was more easily handled with the initialization.

Primary Keys are listed in most entities. In an implementation the primary key may be a sequential assigned non-intelligent key that is assigned by a computer system to track individual database records. It is standard database design practice to eliminate the intelligence, or attribute values, that are imbedded in a primary key. Another type of key, called a concatenated key, may be used in place of a primary key. A concatenated key is a combination of all the attributes needed to make a unique identifier for each record in a physical database. There is no attempt in this standard to standardize the values for these sequential keys or primary keys. These will need to be addressed in the individual implementation. A Primary key assigner has been assigned to key entities or features to indicate the agency, organization or jurisdiction that assigns and maintains the primary key.

An accompanying informative annex for lists of domain values is the Federal Domain of Values. These domain value lists accompany some of the attributes and are applicable to federal implementation.

AGENT

An Agent is an individual, organization, or public agency that holds rights, interests, or restrictions in land, holds or files land records, or has established a land description, a coordinate value or a monument.

ATTRIBUTES:

Agent ID

The Agent is the primary key, which identifies each record in the Agent entity.

Agent ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Alias Agent ID

The Alias Agent has additional information about the Agent. Typically this attribute is used to point to an alternate name by which the Agent is also known.

Former Agent ID

The Former Agent points to another record in the Agent entity, and typically points to a previous name by which the Agent was known.

Agent Name

The Agent Name is a text name for the agent that can be used for display, printing or interface uses. The Agent Name comes from the Individual, Organization, or Public Agency entities and is a concatenation of these values. The Agent Name at this level is redundant and does not reflect a standard requirement. It is included to assist with physical implementation.

Agent Type

The Agent type indicates where the agent is a public agency, a private organization or an individual.

Suggested Domain of Values: federal, tribal, state, regional, county, local, private, regulated, not for profit, international

ANGLE

The Angle entity describes the angular measure between two record boundaries.

ATTRIBUTES:

Angle ID

The Angle ID is a primary key, which identifies each record in the Angle entity.

From Record Boundary ID

The Record Boundary ID is a foreign key that points to a record in the Record Boundary entity, where information about the Record Boundary can be found.

To Record Boundary ID

The Related Record Boundary ID is a foreign key that points to a record in the Record Boundary entity where information on the Related Record Boundary can be found.

Reference Direction

The Reference Direction is the basis of the angle or direction in the Angle attribute. For example, an angle may be turned from magnetic north or from a celestial observation.

Angle Value

An Angle is the difference in direction between two convergent lines (American Congress on Surveying and Mapping, 1978, page 7).

Angle Reliability

The Angle reliability is the accuracy or certainty of an angle measurement

CIRCULAR CURVE

A Circular Curve is a segment of the circumference of a circle. Circular curves are assumed to be concave. Circular curves are a special instance of a curve and are included as a separate entity because these are the most commonly occurring curves in Cadastral boundaries.

ATTRIBUTES:

Radius

The Radius is the distance from the center of the curve to any point on the circular curve.

Central Angle

The Central Angle of a Circular Curve is the angle at the center of radius of a circular arc included between the radii, passing through the beginning and ending of the arc.

Direction of Curve

The Direction of Curve is defined as the direction the curve tends, as stationing along the curve increases.

Suggested Domain Values: Left, Right, North, East, South, West

Degree of Curve

The Degree of Curve arc definition is the central angle subtended by a circular arc of 100 feet. The Degree of Curve chord definition is the central angle subtended by a chord of 100 feet.

Long Chord Length

The Long Chord Length is the straight line distance connecting the beginning of the curve and the end of the curve.

Length of Curve

Length of Curve is arc distance of the Circular Curve.

Degree of Curve Type

The Type of Degree of Curve is either the arc definition or the chord definition.

Suggested Domain Values: Arc, Chord

CORNER

A Corner is a legal location. It may mark the extremity of Parcel or a Parcel Legal Area. A Corner may have multiple Corner Points, which serve as measures of markers for the legal location of the Corner.

Corner ID

The Corner ID is the primary key, which identifies each record in the Corner entity.

Corner ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Corner Label

The Corner Label is a name describing the legal location. For Public Land Survey System Corners, these are names for Corners on the base land net. Other labels relate to Corners of special surveys or private sector land subdivision surveys.

CORNER POINT

A Corner Point is a point feature, which marks the ends of Record Boundaries or the extremities of a Legal Area. A Corner Point may or may not be monumented and is any representation of a Corner.

ATTRIBUTES:

Corner Point ID

The Corner Point ID is the primary key, which identifies each record in the Corner Point entity.

Corner Point ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Corner ID

The Corner ID is a foreign key, which points to a record the Corner entity, where information about the Corner can be found.

Monument Type

The Monument Type describes the material, composition, and other characteristics of the physical corner marker, if present. The monument type might be a road or a tree or other physical feature. The monument type may also be an indication of the cartographic symbol the Corner Point is representing, if the Corner Point is derived from a digitized representation.

Suggested Domain Values: Aluminum Cap, Aluminum Marker, Axle, Bolt, Brass Cap, Cap-And-Bolt, Concrete Post, Disk, Fence Post, Iron Pipe, Iron Post, Marked Stone, Metal Rod, Nail, Pk Nail, Rebar, Roadway, Rock, Rock Cairn, Steel Pin, Tree, Water Cap, Wooden Hub, Wooden Stake

Monument Date Set

The Monument Date Set is the date the monument was set by the Agent.

Corner Point Status

The Corner Point Status describes the Corner Point relationship to other Corner Points at the same Corner.

Suggested Domain Values: replaces, junior, senior, multiple, current

Source ID

The Source ID is a foreign key that points to a record in the Source entity, where information on the Source can be found.

COORDINATE REFERENCE

The Coordinate Reference contains information on the coordinate system, units of measure, and format of the coordinate value. If all the coordinate values in an implemented systems are the same then this coordinate reference information can be stored as data set metadata and can follow the form and format of the Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata FGDC-STD-001-1998. This entity and the attributes in this entity support the potential for coordinate values from multiple coordinate systems.

ATTRIBUTES:

Coordinate Reference ID

The Coordinate Reference ID is the primary key, which identifies each record in the Coordinate Reference entity.

Horizontal Datum (X/Y Datum)

The Horizontal Datum is the identification given to the reference system used for defining the coordinates of points. This definition comes from the Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata FGDC-STD-001-1998.

Suggested Domain Values: North American Datum of 1927, North American Datum of 1983

Coordinate System

The Coordinate System is the reference frame or system from which linear or angular quantities are measured and assigned to the position that a point occupies. (From Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata FGDC-STD-001-1998)

Suggested Domain Values: See Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata FGDC-STD-001-1998, which includes all Universal Traverse Mercator Zones, all State Plane Coordinate Zones and many other coordinate systems

COORDINATE REFERENCE - CONTINUED

Coordinate System Units

The Coordinate System Units are the units of measure for the coordinate values in the horizontal.

Suggested Domain Values: International Feet, Survey Feet, Meters, Decimal Degrees, Degree-Minute-Second, Degree-Minute-Decimal Minute, Radians

Vertical Datum (Z Datum)

The vertical datum is the identification given to the reference system used for defining the elevation of points. This definition comes from the definition for the Altitude Datum from the Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata FGDC-STD-001-1998, which is the identification given to the surface taken as the surface of reference from which altitudes are measured.

Suggested Domain Values: National Geodetic Vertical Datum of 1929, North American Vertical Datum of 1988

Vertical Units (Z Units)

The Vertical Units are the units of measure for the elevation values

Suggested Domain Values: International Feet, Survey Feet, Meters

COORDINATE VALUE

The Coordinate Value is the horizontal, vertical, or three-dimensional location expressed as a coordinate. A vertical position can be expressed without an associated horizontal value, likewise horizontal values may not have an accompanying vertical value.

ATTRIBUTES:

Coordinate ID

The Coordinate ID is the primary key, which identifies each record in the Coordinate Value entity.

Coordinate ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Corner Point ID

The Corner Point ID is a foreign key, which points to a record in the Corner Point entity, where information on the Corner Point can be found.

X Coordinate

This is the X Coordinate value or easting for a coordinate set. An X coordinate may be expressed as unit of degrees

Y Coordinate

This is the Y Coordinate value or northing for a coordinate set. An Y coordinate may be expressed as unit of degrees

Z Coordinate (Elevation)

This is the Z Coordinate value or elevation, which may occur with or without associated X and Y values.

Coordinate Value Status

The Coordinate Value Status indicates whether the measured coordinate was obtained as part of a legal description and is the legal value for the position of the corner point and the corner or whether the measured coordinate value is provided as informational.

Suggested Domain Values: Record, Informational, Active, Archived

COORDINATE VALUE - CONTINUED

Source ID

The Source ID is a foreign key that points to a record in the Source entity, where information on the Source can be found.

Coordinate Reference ID

The Coordinate Reference ID is a foreign key that points to a record in the Coordinate Reference entity, where information on the Coordinate Reference can be found.

X Accuracy

The accuracy of the X or East Coordinate expressed as the X component of a 95% percent error ellipse. Accuracy is the closeness of results of observations, computations or estimates to the true values or the values accepted as being true.

Y Accuracy

The accuracy of the Y or North Coordinate expressed as the Y component of a 95% percent error ellipse. Accuracy is the closeness of results of observations, computations or estimates to the true values or the values accepted as being true.

Z Accuracy

The accuracy of the Z or Elevation expressed as the semi-major axis of the 95% percent error ellipse. Accuracy is the closeness of results of observations, computations or estimates to the true values or the values accepted as being true.

Reliability

The reliability is a measure of the total accuracy of a coordinate value. The FGDC National Standard for Spatial Data Accuracy (NSSDA) describes a methodology for defining this reliability.

Accuracy Comments

The Accuracy Comments are any statements or qualifications about the accuracy of a coordinate value.

COORDINATE VALUE - CONTINUED

Coordinate Method

The Coordinate Method is technology that was used to establish the coordinate value. This method could apply to the Horizontal, the three dimensional or the vertical only. This method applies to all coordinate values (X, Y or Z) reported for the corner point

Suggested Domain Values: Traverse Line of Sight Survey, Doppler, Global Positioning System, Inertial Survey, Digitized, Radial Survey Line of Sight, Total Station

Coordinate Procedure

The Coordinate Procedure is the procedure using the methods above to measure the coordinate value. This can also be a standard followed with the method or technology to measure the coordinate value.

Suggested Domain Values: A Order, B Order, First Order, Second Order, RTK, HARN

GEOPOLITICAL AREA

The geopolitical area captures the nation, state, county or municipality information required for the legal area description. It is expected that the format, content, and naming of these entities will follow existing federal standards.

ATTRIBUTES:

Geopolitical ID

The Geopolitical ID is the primary key, which identifies each record in the Geopolitical entity.

Geopolitical ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Nation

The Nation is an international body or organization of the Public Agency such as United States, Canada, or Native American Tribe. The suggested domain for Nation follows Federal Information Processing Standards Publication 10-4. <http://www.nima.mil/gns/html/fips10-4.html>

State

State is one of the primary divisions of the United States. The suggested domain follows the abbreviation and format coding of Federal Information Processing Standards Publication 10-4. <http://www.nima.mil/gns/html/fips10-4.html>

County

A County is the first division of a State. The definition and suggested domain of this attribute is the Federal Information Processing Standards Publication 6-4. <http://www.itl.nist.gov/fipspubs/fip6-4.htm>

City/Village/Town

A City/Village/Town is a division of a County. The definition and suggested domain of this attribute is the Federal Information Processing Standards Publication 55-2, which is now maintained through the Geographic names Information System (GNIS). <http://geonames.usgs.gov/>

Local Jurisdiction

A Local Jurisdiction is a further division of the City/Village/Town. <http://geonames.usgs.gov/>

GEOPOLITICAL LEGAL AREA

The Geopolitical Legal Area describes the relationship between the Legal Area Description and Geopolitical Areas

ATTRIBUTES:

Geopolitical Legal Area ID

The Geopolitical Legal Area ID is the primary key, which identifies each record in the Geopolitical Legal Area entity.

Geopolitical ID

The Geopolitical ID is a foreign key, which points to an occurrence in the Geopolitical entity, where information on the Geopolitical Area can be found.

Legal Area Description ID

The Legal Area Description ID is a foreign key, which points to an occurrence in the Legal Area Description entity, where information on the Legal Area Description can be found.

INDIVIDUAL

A single person, acting on behalf of himself, as distinguished from a group, corporation, or partnership.

ATTRIBUTES:

Agent ID

The Agent ID is a foreign key, which points to a record in the Agent entity where information on the Agent can be found.

Given Name

The name of a person assigned at birth, baptism, or adoption excepting the surname.

Surname

The Family Name inherited, or assigned at birth or adoption, or through a legal name change or marriage.

Other Name

Any other part of the formal name that is not included in the Given Name or the Surname. It includes hyphenated portions of surnames and other legal names.

LEGAL AREA CORNER

The Legal Area Corner describes the relationship between the Corner and the Legal Area.
ATTRIBUTES:

Legal Area Corner ID

The Legal Area Corner ID is the primary key, which identifies each record in the Legal Area Corner entity.

Legal Area Description ID

The Legal Area Description ID is a foreign key, which points to an occurrence in the Legal Area Description entity, where information on the Legal Area Description can be found.

Corner ID

The Corner ID is a foreign key, which points to an occurrence in the Corner entity, where information on the Corner can be found.

Controlling

Controlling indicates the method by which a Corner controls the subsequent division of a Legal Area.

Suggested Domain Values: Distance, Direction, Distance and Direction

Placement

Placement describes the relative position of a Corner in a Legal Description.

Suggested Domain Values: C, N, S, E, W, NW, NE, SE, SW, NNE, ENE, ESE, SSW, SSE, WSW, WNW, NNW, SC, EC, WC, NC, free text

Note: in the domain C stands for center

Sequence

The Sequence describes the location of the Corner within the Legal Area.

Suggested Domain Values: 000 <= sequence <= 999

Corner Number

Corner number is the serial number assigned to corners on original survey documents.

Suggested Domain Values: 000 <= corner number <= 999, free text

LEGAL AREA CORNER - CONTINUED

Corner Classification

The Corner Classification describes the specific Corner. The Corner gains its type by association with a polygon for example a section corner versus an angle point in a parcel for the same corner. The informative appendix for the Corner Classification suggested domain is Appendix 1.

Suggested Domain Values: Angle Point, Auxiliary Meander Corner, Center Quarter Section Corner, Intersection Point, Crossing Closing Corner, Location Corner, Location Monument, Meander Corner, Mile Corner, Mile Post, Point on Line, Quarter-Corner, Section Corner, Special Meander Corner, Subdivision of Section Corner, Township Corner, Witness Point, free text

Corner Qualifier

The Corner Qualifier is used to identify additional information about the relative placement of the Corner. The informative appendix for the Corner Qualifier domain is Appendix 1.

Suggested Domain Values: Closing, Witness, Auxiliary, Amended

Corner Type

The Corner Type is a concatenation of the Corner Classification and the Corner Qualifier. It used to simplify the implementation and provide one list of corner types.

Suggested Domain Values: Angle Point, Auxiliary Meander Corner, Center Quarter Section Corner, Closing Center of Section Corner, Closing Quarter Corner, Closing Section Corner, Closing Subdivision of Section Corner, Closing Township Corner, Intersection Point, Crossing Closing Corner, Location Corner, Location Monument, Lot Corner, Meander Corner, Mile Corner, Mile Post, Point on Line, Quarter-Corner, Section Corner, Special Meander Corner, Subdivision of Section Corner, Survey Subdivision Corner, Township Corner, Witness Center of Section Corner, Witness Quarter Corner, Witness Subdivision of Section Corner, Witness Township Corner, Witness Point

Corner Aliases

Formerly Local Corner Name. This is any number of alternative names or aliases for the corner as needed to crosswalk corner information among agencies and other contributors. These are text attributes and the numbers of aliases will vary among systems. Documentation of the rules, if any, for deriving these corner aliases should be included with the metadata.

LEGAL AREA DESCRIPTION

A Legal Area Description provides the structure for assembling the components of a single legal description into one. The components of the legal area description can be used to build legal descriptions based on areas. For example, a legal area description could be a lot in a subdivision and that lot may be contained in a Public Land Survey System Area.

ATTRIBUTES:

Legal Area Description ID

The Legal Area Description ID is the primary key, which identifies each record in the Legal Description entity.

Legal Area Description ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Source ID

The Source ID is a foreign key that points to a record in the Source entity, where information on the Source can be found.

LEGAL AREA RECORD BOUNDARY

The Legal Area Record Boundary is an intersecting entity between the Legal Area Description and the Record Boundary entities. It describes the extent of a Legal Area in terms of each boundary segment.

ATTRIBUTES:

Legal Area Record Boundary ID

The Legal Area Record Boundary ID is the primary key, which identifies each record in the Legal Area Record Boundary entity.

Legal Area Description ID

The Legal Area Description ID is a foreign key, which points to an occurrence in the Legal Area Description entity, where information on the Legal Area can be found.

Record Boundary ID

The Record Boundary ID is a foreign key, which points to an occurrence in the Boundary entity, where information on the Record Boundary can be found.

Legal Area Record Boundary Status

The Legal Record Boundary Area Status describes the relationship of the Record Boundary to the Legal Area.

Suggested Domain Values: Update, Continuation, Replaced

ORGANIZATION

An Organization is a legal entity created by or under the authority of the laws of a State or Nation. These are typically private or not for profit organizations as opposed to government agencies.

ATTRIBUTES:

Agent ID

The Agent ID is a foreign key, which points to a record in the Agent entity where information on the Agent can be found.

Organization Name

The identifying title or label for the organization as stated on the Organization's legal documents.

Organization Type

The Organization Type identifies the tax status of the Organization.

Suggested Domain Values: Non-Profit, Regulated, Exempt, Profit

Organization State

The Organization State is the State in which the legal organization is organized and recognized.

Suggested Domain Values: The suggested domain follows the abbreviation and format coding of Federal Information Processing Standards Publication 10-4.

<http://www.nima.mil/gns/html/fips10-4.html>

Division/Department

The Department or Division is a further indicator of the precise sub-organization.

OTHER CURVE

Other Curve is any non-straight segment of a parcel or legal area that is also not a circular curve.

ATTRIBUTES:

Other Curve Type

The Curve Type indicates the mathematical form of the Other Curve.

Suggested Domain Values: Conic Parabola, Conic Ellipse, Conic Hyperbola, Logarithmic Spiral, Archimedean Spiral, Hyperbolic Spiral, N-Leafed Rose, Lemniscate, Cycloid, Four Cusp Hypocycloid, Cardioid, Probability, Catenary, Logarithmic, Exponential, Sine, Tangent, Secant

Other Curve Parameters

The parameters are the lists of values that are necessary to describe the other Curve. The parameter list includes the definition of the parameter, the parameter value and the equation used.

OUTER CONTINENTAL SHELF BLOCK

An Outer Continental Shelf Block is an approved subdivision of the Outer Continental Shelf as depicted on Outer Continental Shelf Official Protraction Diagrams or Leasing Maps. If an offshore boundary line(s) intersects an Outer Continental Shelf Block, area subdivisions are created. These boundary coordinates and area subdivisions are portrayed in detail on a Supplemental Official Outer Continental Shelf Block Diagram.

ATTRIBUTES:

Outer Continental Shelf Description ID

The Legal Area Description ID is a foreign key, which points to a record in the Outer Continental Shelf Description entity, where information about the Outer Shelf Continental Description can be found.

Outer Continental Shelf Description ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions. The expected assigner for this identifier is the Mineral Management Service (MMS) within the Department of Interior because this agency has sole authority for the creation and maintenance of this legal description system.

Outer Continental Shelf Block Number

The Outer Continental Shelf Block Number is the identifier for an Outer Continental Shelf Block on an Outer Continental Shelf Protraction Diagram or Leasing Map.

BUSINESS RULES:

1. Outer Continental Shelf Blocks numbered less than 6000 are on the North American Datum of 1927 (NAD 27) and may be depicted on Outer Continental Shelf Official Protraction Diagrams or Leasing Maps."
2. Outer Continental Shelf Blocks numbered greater than 6000 are on the North American Datum of 1983 (NAD 83) and are depicted on Outer Continental Shelf Official Protraction Diagrams.

OUTER CONTINENTAL SHELF BLOCK PARCEL

Outer Continental Shelf Blocks can be subdivided into units for leasing, management, or resource management purposes. This entity describes those subdivisions.

ATTRIBUTES:

Outer Continental Shelf Block Parcel Designator

The Outer Continental Shelf Block Parcel Designator is one or two letters uniquely identifying the subdivisions of an Outer Continental Shelf Block.

Outer Continental Shelf Block Number

The Outer Continental Shelf Block Number is a foreign key which points to a record in the Outer Continental Shelf Block entity, where information about the Outer Continental Shelf Block can be found.

OUTER CONTINENTAL SHELF DESCRIPTION

The Outer Continental Shelf Description contains attributes for the primary division of the Outer Continental Shelf into describable areas.

BUSINESS RULES:

1. Outer Continental Shelf Descriptions are divided into either Outer Continental Shelf Official Protraction Diagrams or Leasing Maps.

ATTRIBUTES:

Outer Continental Shelf Description ID

The Outer Continental Shelf Description ID is the primary key, which identifies each record in the Outer Continental Shelf Description ID entity.

Leasing Map Designator

Outer Continental Shelf Leasing Maps depict marine cadastres based on a coastal State's NAD 27 State Plane Coordinate System. The seaward projection of a State Plane Coordinate System onto the Outer Continental Shelf uses the Lambert Conformal Conic Projection. These diagrams depict approved subdivisions of the Outer Continental Shelf in U.S. survey feet in offshore portions of California, Louisiana, and Texas.

The Leasing Maps are designated by alpha-numeric codes. The first two character positions are alpha characters that correspond to the two letter abbreviation for the State, LA for Louisiana, TX for Texas, and CA for California. Subsequent characters are alpha-numeric characters for the Map number.

Leasing Map Name

The Leasing Map Name is the name of the map as it appears on the actual Lease Map. Area names for Leasing Maps were originally assigned by the Bureau of Land Management.

Outer Continental Shelf Official Protraction Diagram

Outer Continental Shelf Official Protraction Diagrams depict marine cadastres and are constructed on the Universal Transverse Mercator (UTM) grid system. They are diagrams showing approved subdivisions of the Outer Continental Shelf. For more information see Explanatory Note 1 at the end of this section.

OUTER CONTINENTAL SHELF DESCRIPTION - CONTINUED

Outer Continental Shelf Official Protraction Diagram Name

The Outer Continental Shelf Official Protraction Diagram Name is the official geographic or proper name approved by the U.S. Board on Geographic Names to the specific portion of the Outer Continental Shelf depicted on the Outer Continental Shelf Official Protraction Diagram. Outer Continental Shelf Official Protraction Diagrams without names certified by the U.S. Board on Geographic Names remain as “Unnamed”.

Legal Area Description ID

The Legal Area Description ID is a foreign key that points to a record in the Record Boundary entity, where information about the Legal Area Description can be found.

PARCEL

A Parcel is a single cadastral unit, which is the spatial extent of the past, present, and future rights and interests in real property.

ATTRIBUTES:

Parcel ID

The Parcel ID is the primary key, which identifies each record or occurrence in the Parcel entity. This is normally the system assigned number that manages record relationships internal to systems.

Parcel ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Parcel Type

Parcel Type describes the function, purpose, resource or collective purpose for a parcel. The Parcel Type applies to the entire parcel. The parcel type is categorization that can be useful for display or management. The domains of values are listed as suggested content. The content of this attribute is not standardized.

Domain: Taxable, Right of Way, General Common Element, Water, Ownership

Parcel Name

The Parcel Name is an identifying name or number for a Parcel. It may also be a project number or any other label for a parcel such as park name.

Parcel Labels

Formerly Parcel Local Label. Local governments or other organizations may have a method or system for identifying and then applying a number for parcels. These numbers are often used for local administrative purposes. These attributes, and there may be many, refer to parcel identification systems that are sometimes called natural keys or other user recognizable identifiers. The form and content and rules for parcel labels should be included with the metadata. Parcel ID is a common name for this label in local governments

PARCEL AREA

The Parcel Area describes the quantity and type of two-dimensional space included in the Parcel.

ATTRIBUTES:

Parcel ID

The Parcel ID is a foreign key that points to a record in the Parcel entity, where information on the Parcel can be found.

Parcel Area Quantity

Parcel Area Quantity is a numerical value for the two dimensional extent of the Parcel.

Parcel Area Type

The Area Type describes the type of two dimensional surface being quantified.

Suggested Domain Values: Official, Computed, From Deed, Surveyed

Parcel Area Unit

The Parcel Area Unit is the unit of measure for the two dimensional surface being quantified.

Domain: Acres, Hectares, Square Feet, Square Meters, Square Yards

PARCEL LEGAL AREA

The Parcel Legal Area is the intersecting of the Legal Area Description and Parcel, and it describes the extent of the Parcel as a whole unit as opposed to a series of Record Boundaries or Corner Points.

ATTRIBUTES:

Parcel Legal Area ID

The Parcel Legal Area ID is a foreign key that points to a record in the Parcel Legal Area entity, where information on the Parcel Legal Area can be found.

Legal Area Description ID

The Legal Area Description ID is a foreign key that points to a record in the Legal Area Description, where information on the Legal Area Description can be found.

Parcel ID

The Parcel ID is a foreign key that points to a record in the Parcel entity, where information on the Parcel can be found.

Parcel Legal Area Status

The Parcel Legal Area Status describes the reason for multiple Legal Area Descriptions for a Parcel.

Suggested Domain Values: Updated, Exception, Correction, Replaced, Congruent

PARCEL RECORD BOUNDARY

The Parcel Record Boundary is the intersection of the Parcel and the Record Boundary entities. It describes the extent of a parcel in terms of each boundary segment.

ATTRIBUTES:

Parcel Record Boundary ID

The Parcel Record Boundary ID is a foreign key that points to a record in the Parcel Record Boundary entity, where information on the Parcel Record Boundary ID can be found.

Parcel ID

The Parcel ID is a foreign key that points to a record in the Parcel entity, where information on the Parcel can be found.

Record Boundary ID

The Record Boundary ID is a foreign key that points to a record in the Record Boundary entity, where information on the Record Boundary can be found.

Parcel Record Boundary Status

As one Parcel may be matched to or described by many Record Boundaries, the Parcel Boundary Status describes the relationships of the Record Boundary to the Parcel.

Suggested Domain Values: Updated, Exception, Correction, Replaced, Congruent, Connecting

PARCEL RIGHT

The Parcel Right is an intersecting entity that describes the relationships between rights and interests and the parcel. One parcel can have many rights and interests and one right and interest can found in many parcels.

ATTRIBUTES:

Parcel Right ID

The Parcel Right ID is the primary key, which identifies each record in the Parcel Right entity.

Parcel ID

The Parcel ID is a foreign key that points to a record in the Parcel entity, where information on the Parcel can be found.

Right ID

The Right ID is a foreign key that points to a record in the Right and Interest entity, where information on the rights and interests can be found.

PARCEL TRANSACTION

The Parcel Transaction is an intersecting entity that describes the relationships between a parcel and an instrument of transaction. One transaction can involve many parcels and one parcel can be involved in many transactions.

ATTRIBUTES:

Parcel Transaction ID

The Parcel Transaction ID is a foreign key that points to a record in the Parcel Transaction entity, where information on the Parcel Transaction ID can be found.

Transaction Document ID

The Transaction Document ID is a foreign key, which points to a record the Transaction Document entity where information on the Transaction Document can be found.

Parcel ID

The Parcel ID is a foreign key that points to a record in the Parcel entity, where information on the Parcel can be found.

Indispute

A text field indicating whether a Parcel in a Transaction is contested or in question by virtue of being in court.

Suggested Domain Values: Yes, No

PUBLIC AGENCY

A Public Agency is a public sector organization defined by and part of a governmental body or one chartered by government body for a public purpose, such as the U.S. Postal Service or the Tennessee Valley Authority.

ATTRIBUTES:

Agent ID

The Agent ID is a foreign key, which points to a record in the Agent entity where information on the Agent can be found.

Nation

The Nation is an international body or organization of the Public Agency such as United States, Canada, or Native American Tribe. The suggested domain for Nation follows Federal Information Processing Standards Publication 10-4. <http://www.nima.mil/gns/html/fips10-4.html>

State

State is one of the primary divisions of the United States. The suggested domain follows the abbreviation and format coding of Federal Information Processing Standards Publication 10-4. <http://www.nima.mil/gns/html/fips10-4.html>

County

A County is the first division of a State. The definition and suggested domain of this attribute is the Federal Information Processing Standards Publication 6-4. <http://www.itl.nist.gov/fipspubs/fip6-4.htm>

City/Village/Town

A City/Village/Town is a division of a County. The definition and suggested domain of this attribute is the Federal Information Processing Standards Publication 55-2, which is now maintained through the Geographic names Information System (GNIS). <http://geonames.usgs.gov/>

Local Jurisdiction

A Local Jurisdiction is a further division of the City/Village/Town. <http://geonames.usgs.gov/>

Public Agency Name

The Public Agency Name is the full name of a Public Agency. For federally funded agencies follow FIPS PUB 95-2. <http://www.itl.nist.gov/fipspubs/fips95-2.doc>

PUBLIC LAND SURVEY SYSTEM DESCRIPTION

Public Land Survey System Descriptions are descriptions for areas of land that follow the pattern of Townships and Ranges established by the federal government in 1785 and its successors. For more information see Explanatory Note 2 at the end of this section.

ATTRIBUTES:

PLSS Description ID

The PLSS Description ID is a primary key, which identifies each record in the Public Land Survey Description entity.

PLSS Description ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Legal Area Description ID

The Legal Area Description ID is a foreign key that points to a record in the Legal Area Description, where information on the Legal Area Description can be found.

Origin of Public Land Survey System

The Origin of Public Land Survey System is a reference for the numbering of townships and ranges within a public land survey area.

Suggested Domain Values: Base Line of the U.S. Military Survey, Black Hills Meridian, Boise Meridian, Chickasaw Meridian, Choctaw Meridian, Cimarron Meridian, Copper River Meridian, Extended Fourth Principal Meridian, Fairbanks Meridian, Fifth Principal Meridian, First Principal Meridian, Fourth Principal Meridian, Gila and Salt River Meridian, Great Miami River, Humboldt Meridian, Huntsville Meridian, Indian Meridian, Kateel River Meridian, Louisiana Meridian, New Mexico Principal Meridian, Michigan Meridian, Mount Diablo Meridian, Muskingum River, Navajo Meridian, Ohio River, Principal Meridian, Ohio Company Purchase, St. Helena Meridian, St. Stephens Meridian, Salt Lake Meridian, San Bernardino Meridian, Second Principal Meridian, Seward Meridian, Scioto River, Sixth Principal Meridian, Tallahassee Meridian, Third Principal Meridian, Twelve Mile Square Reserve, Uintah Meridian, Umat Meridian, Ute Meridian, Washington Meridian, Willamette Meridian, Wind River Meridian

PUBLIC LAND SURVEY SYSTEM DESCRIPTION - CONTINUED

Survey Name

Public Land survey areas in Ohio are identified by a name. The named areas have an origin of Public Land Survey System value and then are further identified by Survey Name.

Suggested Domain Values: Michigan Survey, Ohio River Survey, Muskingum River Survey, Ohio River Survey, Scioto River Base, Between the Miamis, North of Symmes Purchase, Symmes Purchase, Twelve Mile Square Reserve, West of the Great Miami, United States Military Survey, Connecticut Western Reserve, Virginia Military Survey, Virginia Military District, Ohio Company Purchase, Donation Tract, French Grants

Secondary Survey Name

Secondary Survey Name further identifies named areas within the Ohio surveys.

Suggested Domain Values: Old Seven Ranges, Congress Lands North of Old Seven Ranges, Congress Lands East of Scioto River, Refugee Lands

PUBLIC LAND SURVEY SYSTEM TOWNSHIP

In the Public Land Survey System a Township refers to a unit of land, that are nominally six miles on a side, usually containing 36 sections.

BUSINESS RULE:

1. Public Land Survey System Townships will have a Public Land Survey System Origin and a State.

ATTRIBUTES:

PLSS Township ID

The PLSS Township ID is a primary key, which identifies each record in the Public Land Survey System Township entity.

PLSS Description ID

The PLSS Description ID is a foreign key, which points to a record in the Public Land Survey System Description entity, where information on the Public Land Survey System Description can be found.

Township Number

The Township Number indicates the number of rows of townships, north or south from a Public Land Survey System Origin.

Township Direction

The direction of a row of Townships from a Public Land Survey System Origin.

Suggested Domain Values: North, South

Township Fraction

Township Fractions are created when there are gaps between surveyed Township boundaries or due to excess size in Townships that arose from executing original surveys.

Suggested Domain Values: 1/4 Township, 1/2 Township, 3/4 Township

PUBLIC LAND SURVEY SYSTEM TOWNSHIP - CONTINUED

Range Number

The Range Number indicates the number of columns of townships, east or west from a Public Land Survey System Origin.

Range Direction

The direction of a column of townships from a Public Land Survey System Origin.

Suggested Domain Values: East, West

Range Fraction

Range Fractions are created when there are gaps between surveyed Township boundaries or due to excess size in Townships that arose from executing original surveys.

Suggested Domain Values: 1/4 Range, 1/2 Range, 3/4 Range

Township Duplicate Status

If there are multiple townships in a Public Land Survey System Origin, State and Survey Name, the Township Duplicate Status is used to establish uniqueness. When more than one Public Land Survey System Township has the same Township and Range numbers and directions and fractions, and are in the same State, this attribute is used to distinguish among duplicate values.

Suggested Domain Values: first duplicate - This value is applied to the duplicate Public Land Survey System Township that is closest to the base line of the Public Land Survey System Origin. If both Public Land Survey System Townships are equidistance from the base line, than the one closest to the Meridian of the Public Land Survey System Origin is assigned the value first duplicate. This was formerly known as code a or in the Ohio Symmes Purchase as code f.

second duplicate - This is the attribute value assigned to the Public Land Survey System Township that is furthest from the Public Land Survey System origin. This was formerly known as code b.

PUBLIC LAND SURVEY SYSTEM TOWNSHIP FIRST DIVISION

Public Land Survey System Townships first divisions are normally Public Land Survey System Tracts or Public Land Survey System Sections. This entity is the primary or first subdivisions of a Public Land Survey System Township.

ATTRIBUTES:

PLSS First Division ID

The PLSS First Division ID is a primary key that identifies each record in the Public Land Survey System Township First Division entity.

PLSS Township ID

The PLSS Township ID is a foreign key that points to a record in the Public Land Survey System Township entity, where information on the Public Land Survey System Township can be found.

PLSS First Division Type

The First Division Type of a Public Land Survey System Township is the primary or first subdivision category. If the first division type is fractional section, then the metadata for this data set will need to document how fractional sections are labeled.

Suggested Domain Values: Unsectionalized Area, Section, Lot, Tract, Protraction Block, Parcel, Fractional Section, Water

A Protraction Block is a designation for sections of uncertain acreage which lie between the coordinate based interior and the prior surveyed boundaries of record that generally form the exterior perimeters of the protracted areas. (BLM IM 93-353, 9/30/93).

PLSS First Division Designator

The First Division Designator is the letter, number, or letter number combination that identifies the First Division.

PLSS First Division Suffix

The First Division Suffix is the indicator for duplicate First Divisions.

PUBLIC LAND SURVEY SYSTEM TOWNSHIP SECOND DIVISION

Public Land Survey System Townships second divisions are normally Public Land Survey System Aliquot Parts or Public Land Survey System Government Lots. This entity is the second subdivision of a Public Land Survey System Township. The Second Division may extend to the quarter or quarter-quarter division of a section. Divisions below the sixteenth (quarter-quarter) are in the PLSS Third Division.

ATTRIBUTES:

PLSS Second Division ID

The PLSS Second Division ID is a primary key that identifies each record in the Public Land Survey System Township Second Division entity.

PLSS First Division ID

The PLSS First Division ID is a foreign key that points to a record in the Public Land Survey System First Division entity, where information on the Public Land Survey System First Division can be found.

PLSS Second Division Type

The Second Division Type of a Public Land Survey System Township is the second subdivision category.

Suggested Domain Values: Block, Lot, Other Aliquot Part, Government Lot, Protracted Lot, Quarter, Sixteenth, Half Section, Half Quarter, Parcel, Lot, Tract Lot

PLSS Second Division Designator

The Second Division Designator is the letter, number, or letter number combination that identifies the Second Division.

Suggested Domain Values: N, S, E, W, N2, S2, E2, W2, NE, NW, SE, SW, NE, NW, SE, SW, NENE, NENW, NESE, NESW, NWNE, NWNW, NWSE, NWSW, SENE, SENW, SESE, SESW, SWNE, SWNW, SWSE, SWSW, N2NE, E2NE, W2NE, S2NE, N2NW, E2NW, W2NW, S2NW, N2SE, E2SE, W2SE, S2SE, N2SW, E2SW, W2SW, S2SW

PLSS Second Division Suffix

The Second Division Suffix is the indicator for duplicate Second Divisions.

PUBLIC LAND SURVEY SYSTEM TOWNSHIP THIRD DIVISION

Public Land Survey System Townships third divisions are typically divisions below the quarter-quarter section aliquot part. This entity is the tertiary subdivision of a Public Land Survey System Township and is the level below the sixteenth part. Divisions beyond third division (fourth, fifth etc) follow the same pattern as this division.

PLSS Third Division ID

The PLSS Third Division ID is a primary key that identifies each record in the Public Land Survey System Township Third Division entity.

PLSS Second Division ID

The PLSS Second Division ID is a foreign key, which points to a record in the Public Land Survey System Second Division entity, where information on the Public Land Survey System Second Division can be found.

PLSS Third Division Type

The Third Division Type of a Public Land Survey System Township is the tertiary subdivision category.

Suggested Domain Values: Lot, Fractional Part, Parcel, Aliquot Part

PLSS Third Division Designator

The Third Division Designator is the letter, number, or letter number combination that identifies the Third Division.

PLSS Third Division Suffix

The Third Division Suffix is the indicator for duplicate Third Divisions.

RECORD BOUNDARY

A Record Boundary is the linear feature that represents the edge of a feature, which may be a Parcel or a legal area. The Record Boundary is the information for each boundary segment. All record boundary features come from the same source and have the same units of measure.

ATTRIBUTES:

Record Boundary ID

The Record Boundary ID is a primary key, which identifies each record in the Record Boundary entity.

Record Boundary ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Record Bounds

Record Bounds describe a boundary location through a call to another legal location, a call to a related document, or a call to a commonly or locally known location, such as Hogan's North Line or Good Value Creek. The Records Bounds contains the name of the line for shoreline and coastal boundaries. It may also be a named feature, a specified elevation value, or any other named call or reference.

Suggested Domain Values: Baseline for Maritime Limits (ambulatory), Baseline for Submerged Lands Act (static), Seaward State Boundary (SSB), Revenue Sharing Boundary (Section 8(g) of OCSLA), Territorial Sea (TS), Contiguous Zone, Continental Shelf Limit, Exclusive Economic Zone, Offshore Lease Blocks, International Maritime Boundaries, National Marine Sanctuary Boundaries, National Estuarine Research Reserve System Boundaries

Record Boundary Legal Status

The Record Boundary Legal Status identifies the Record Boundary's status from a legal or court perspective.

Suggested Domain Values: Ambulatory, Tidal, Disputed, Adjudicated, Connecting Line, Computed, Duplicate, Archived

RECORD BOUNDARY - CONTINUED

Record Boundary Comment

Record Boundary Comment contains additional information about the Record Boundary that may be in the public record, but does conform to listed attributes for Record Boundary.

Direction Type

This attribute is the "basis of bearing" or "basis of azimuth" for the direction. The basis of direction can be based on astronomic observations to the North or South, coordinate system grids, magnetic points or an assumed direction such as northerly along a road centerline

Suggested Domain Values: Assumed, Astronomic North, Astronomic South, Geodetic North, Geodetic South, Grid, Magnetic North, Magnetic South

Direction Unit

The Direction Unit indicates the units for a Direction.

Suggested Domain Values: Decimal Degrees, Degrees-Minutes-Seconds

Distance Unit

Distance Unit defines the units of measure and reference plane upon which distance measurements are taken.

Suggested Domain Values: Chains, U.S. Survey Feet, International Feet, Meters, Vara, Pole, Arpent, Perch, Rod, Stick, Vara - California, Vara - Texas, Vara – Louisiana

Distance Type

Distance Type describes the reference surface for the distance.

Suggested Domain Values: Ground, Sea Level (geodetic), Grid Distance

RECORD BOUNDARY - CONTINUED

Distance Reliability

The Distance Reliability describes the overall precision and accuracy (uncertainty) of the distance measurement components of a Record Boundary

Direction Reliability

The Direction Reliability describes the overall precision and accuracy (uncertainty) of the direction measurement components of a Record Boundary

Record Boundary Measurement Method

The Record Boundary Measurement Method is the process or procedure that is used to determine the record boundary measurement information.

Suggested Domain Values: From record document, digitized, computed, adjusted, field observation

Source ID

The Source ID is a foreign key that points to a record in the Source entity, where information on the Source can be found.

Record Boundary Type

The Record Boundary Type indicates whether the record boundary is a straight line, a circular curve or another curve.

RECORD BOUNDARY CORNER POINT

The Record Boundary Corner Point is an intersecting entity between Record Boundary and Corner Point.

ATTRIBUTES:

Record Boundary Corner Point ID

The Record Boundary Corner Point ID is a primary key, which identifies each record in the Record Boundary Corner Point entity.

Record Boundary ID

The Record Boundary ID is a foreign key, which points to a record in the Record Boundary entity, where information about the Record Boundary can be found.

Corner Point ID

The Corner Point ID is a foreign key, which points to a record the Corner Point entity, where information on Corner Point can be found.

Record Boundary Corner Point Sequence

The Record Boundary Corner Point Sequence describes the relationship of the Corner Point to the Record Boundary. The sequence is the order of the Corner Points along a Record Boundary.

Suggested Domain Values: Beginning, Ending, Integer Value (1-999)

Record Boundary Curve Corner Type

A Record Boundary may be a curve. The Record Boundary Curve Corner Type is used to identify the types of Corner Points that may be related to curves.

Suggested Domain Values: Curve Focus, First Point on Directrix, Second Point on Directrix, Center of Curve, Beginning of Curve, Ending of Curve, Vertex

RECORD BOUNDARY OFFSET

The Record Boundary Offset describes a point on a line that is related to the record boundary but offset from that line by a specified direction and distance. Connecting the points described by the offset forms the record boundary along the offset.

Record Boundary Offset ID

The Record Boundary Offset ID is a primary key, which identifies each record in the Record Boundary Offset entity.

Record Boundary ID

The Record Boundary ID is a foreign key that points to the associated record boundary.

Offset Direction

The Offset Direction is the angle from the record boundary to the offset point measured from the record boundary to the offset point. A ninety-degree angle is a perpendicular offset.

Offset Plane

The Offset Plane describes the planar surface in which the offset direction is measured. In many cases this will be a horizontal plane, but this can also be an upward vertical plane, a downward vertical plane, an orthometric plane or at a specified angle. The angle of the plane is the angle formed by the intersection of the two planes with a horizontal plane cutting through the record boundary.

Offset Point

This is the location of the offset along the record boundary and is measured from the starting point of the record boundary along the record boundary towards the ending point. This distance can be expressed in a milepost format (13+45 for example) or as distance along the line.

Offset Distance

This is the distance along the Offset Direction in the Offset Plane to the offset location.

RESTRICTION

Restriction captures information related to administrative, judicial, or other limitations or permissions for the use and enjoyment of land by the land right holder. These are not transferred rights, although succeeding owners may agree to the same restriction on a Parcel.

Restriction ID

The Restriction ID is a primary key, which identifies each record in the Restriction entity.

Restriction ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Parcel ID

The Parcel ID is a foreign key, which points to a record in the Parcel entity, where information on the Parcel can be found.

Restriction Type

The Restriction Type indicates the category, source, or location of the Restriction.

Restriction Description

The Regulation Restriction Description describes the Restriction on the Parcel.

Source ID

The Source ID is a foreign key that points to a record in the Source entity, where information on the Source can be found.

RIGHT AND INTEREST

This Entity describes the specific rights and interests that are related to a parcel. Rights and interests are benefits or enjoyments in real property that can be conveyed, passed, or otherwise allocated to another for economic remuneration. Rights and interests can be below ground, such as mineral rights, fee simple ownership on the surface, an easement for hunting or grazing or an above ground right such as transferable development right (TDR). A Right and Interest is separable and can be conveyed, either permanently or temporarily such as in a lease and is in the chain of title. The right and interest is distinguishable from a restriction, which is a limitation placed by a governing body and is not in the chain of title.

ATTRIBUTES:

Right and Interest ID

The Separated Right ID is the primary key, which identifies each record in the Right and Interest entity.

Right and Interest ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Right Estate

The Right Estate indicates whether the right is for a subsurface, surface, or above surface estate.

Suggested Domain Values: Subsurface, Surface, Above Surface

RIGHT AND INTEREST - CONTINUED

Right and Interest Type

This is the type or category of the right and interest and it usually describes how the right and interest is held and an indication of the estate. The items in the suggested domain of values are explained below.

Suggested Domain Values: Separated Right, Encumbrance, Tribal Interest

Separated Right

The separated rights are rights and interests in land ownership that can be disconnected from the primary or fee simple surface ownership. For example, mineral and oil rights are often separated from the surface ownership. Separated rights are represented as overlapping non-continuous polygons. The separated rights are modeled similarly to encumbrances. Some of the idiosyncrasies of separated rights are:

- There are often future estates and leases associated with minerals. In these cases the mineral rights may be separated from the surface for a period of time.
- The mineral rights can be divided according to the mineral. For example, fossil fuels, oil and gas, sulfite minerals and surface quarry rock are often considered as distinct separated rights.
- The apex rule for minerals that are found as defined veins and are claimed under the 1872 mining claims act provides for extralateral rights. This means that who ever claims the surface expression of a veined mineral deposit has the rights to the mineral deposit even though it may pass under the land of adjoiners.

Tribal Interest

1990, Native American Graves Protection and Repatriation Act (NAGPRA): This act assigns ownership and control of Native American cultural items, human remains, and associated funerary objects to Native Americans. It also establishes requirements for the treatment of Native American human remains and sacred or cultural objects found on Federal land. This act further provides for the protection, inventory, and repatriation of Native American cultural items, human remains, and associated funerary objects. Requires museums that receive public funds to consult with Native Americans. Native Americans have the power to decide what happens to museum collections of human remains, grave goods, and sacred items. When these items are inadvertently discovered, cease activity, make a reasonable effort to

RIGHT AND INTEREST - CONTINUED

protect the items, and notify the appropriate Indian tribe(s) and/or Native Hawaiian organization(s).

Us Title 25, Chapter 32, Native American Graves Protection And Repatriation
Each Federal agency or museum which has possession or control over holdings or collections of Native American unassociated funerary objects, sacred objects, or objects of cultural patrimony shall provide a written summary of such objects based upon available information held by such agency or museum. The summary shall describe the scope of the collection, kinds of objects included, reference to geographical location, means and period of acquisition and cultural affiliation, where readily ascertainable.

Encumbrance

Encumbrances are limitations on the rights and use of the land. Easements are a common encumbrance but there are many others such as grazing rights, fishing rights, development rights, and floodplains. Legally an encumbrance is a right or interest in the land of another that may diminish its value but does not prevent its sale.

Any right to, or interest in, land which may subsist the fee [ownership] by another to the diminution of its value, but consistent with the passing of the fee [ownership] by conveyance. A claim, lien, charge, or liability attached to and binding real property; as examples a mortgage, judgment lien, mechanics' lien, lease, security interest, easement or right of way. If the liability relates to a particular asset, the asset is encumbered. (Black, 1991)

Most encumbrances run with the land (consistent with the passing of the fee by conveyance). That is, they are tied to the land and will persist from owner to owner. Others exist at the pleasure of the owner, such as leases. Typically leases and similar encumbrances have an effective date and expiration date.

Right Description

This attribute describes more specifically the right or interest that is being defined.

Suggested Domain of Values: Oil, Gas, Oil and Gas, Coal, (a specific mineral), Right of Way, Ingress/Egress, Grazing, Hunting,

RIGHT TRANSACTION

The Right Transaction is an intersecting entity that describes the relationships between right and interest and an instrument of transaction. One transaction can involve many rights and interests and one right and interest can be involved in many transactions.

ATTRIBUTES:

Right Transaction ID

The Right Transaction ID is the primary key, which identifies each record in the Right Transaction entity.

Transaction Document ID

The Transaction Document ID is a foreign key, which points to a record the Transaction Document entity where information on the Transaction Document can be found.

Right ID

The Right ID is a foreign key that points to a record in the Right and Interest entity, where information on the rights and interests can be found.

SOURCE

The Source is the feature level information about the originating information for the record. For federal land records information on Authority may be added to Source information.

ATTRIBUTES:

Source ID

The Source ID is a primary key, which identifies each record in the Source entity. The Source ID is unique for each record in the Source entity within the jurisdiction or authority of the Source Agent ID

Source ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Source Agent

The agency, organization or jurisdiction that assigns, manages and maintains the source information such as register of deeds, recorder, or surveying office. For federally funded agencies follow FIPS PUB 95-2. <http://www.itl.nist.gov/fipspubs/fips95-2.doc>

Source Type

Source Type describes a family of documents, files, images, or other formats that generally conform to the same specifications or having some common unifying characteristic. The suggested domain for Source Type is in Appendix 4.

Source Date

The Source Date is the date of the source document.

Source Comments

The Source Comments are any additional information about the Source information that clarifies the use of the Source information.

Originating Agent

The Originating Agent describes another agent, which may not be the same as the agent that has the source document. For example the name of a surveyor on a plat may be the originating agent and the source agent might be a County Records of Deeds where the plat is filed and the source can be accessed.

STRAIGHT LINE

A Straight Line is a line connecting two points with no curves or changes in bearing or direction.

ATTRIBUTES:

Direction Value

The Direction Value is the quantity of a direction of a boundary. Direction is the angle between a line and an arbitrary chosen reference line. When the reference line is north or south and the angle is designated east or west, the direction is called the bearing. When the reference line is north or south and the angle is measured clockwise, the direction is called azimuth.

Distance Value

Distance Value is the quantity for the distance of a boundary. Distance is the linear measure along a line.

Direction Quadrant

Directions can be measured as either bearings or azimuth. Bearing is an acute angle reference to either north or south. An azimuth is referenced to either north or south and is a full circle measure in the clockwise or counterclockwise direction.

Suggested Domain Values: Azimuth, Northeast, Southeast, Southwest, Northwest

SURVEY SYSTEM DESCRIPTION

A Survey System Description is a named or numbered area of land that can be identified by a type and a designator. The survey system is generally a simultaneous conveyance that defines an area of land within which there is a consistent method of land description.

ATTRIBUTES:

Survey System Description ID

The Survey System Description ID is a primary key that identifies each record in the Survey System Description entity.

Survey System Description ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Legal Area Description ID

The Legal Area Description ID is a foreign key that points to a record in the Legal Area Description, where information on the Legal Area Description can be found.

Survey System Origin

The Survey System Origin is the numbering or measurement starting point or baseline for a Survey System Description.

Survey System Type

Survey System Type indicates the category or major class of the description. The informative appendix for the Survey System Type is in Appendix 3.

Suggested Domain Values: Assessor Plat, Cemetery, Condominium, Farm Lot, French Long Lot, Grant of Land, Homestead Entry, Indian Allotment, Land Grant, Mineral Survey, Plat of Survey, Sequence Conveyance, Small Holding Claim, Small Tracts Act, Subdivision, Survey, Texas Land Grant, Townsite, United States Survey

Survey System Designator

The Survey System Designator is an identifying name or number for a specific type of Survey System area.

SURVEY SYSTEM FIRST DIVISION

The First Division is the primary division of the Survey System.

Survey System First Division ID

The Survey System First Division ID is a primary key that identifies each record in the Survey System First Division entity.

Survey System Description ID

The Survey System Description ID is a foreign key that points to a record in the Survey System Description, where information on the Survey System Description can be found.

First Division Type

The First Division Type describes the classification of the First Survey System Division.

Suggested Domain Values: Block, Lot, Tract, Right of Way, Unit, Fractional Part, Claim, Parcel, Plot, Survey, General Common Element, Outlot

First Division Designator

The Survey System First Division Designator is an alpha, numeric, or alpha-numeric designator used to identify the First Division of the Survey System.

First Division Description

The Survey System First Division Description is a legal description text that describes the first division such as the north half of a block or the westerly 500 feet of an outlot.

SURVEY SYSTEM SECOND DIVISION

The Second Survey Division is the subdivision of the First Division.

Survey System Second Division ID

The Survey System Second Division ID is a primary key that identifies each record in the Survey System Second Division entity.

Survey System First Division ID

The Survey System First Division ID is a foreign key that points to a record in the Survey System First Division, where information on the Survey System First Division can be found.

Second Division Type

The Second Division Type describes the classification of the Survey System Second Division.

Suggested Domain Values: Fractional Part, Outlot, Lot, Tract, Parcel

Second Division Designator

The Survey System Second Division Designator is an alpha, numeric, or alpha-numeric designator used to identify the Second Division of the Survey System.

Second Division Description

The Survey System Second Division Description is a legal description text that describes the second division such as the south half of a lot.

SURVEY SYSTEM THIRD DIVISION

The Third Division is the subdivision of the Second Division. Divisions beyond third division (fourth, fifth etc) follow the same pattern as this division.

Survey System Third Division ID

The Survey System Third Division ID is a primary key that identifies each record in the Survey System Third Division entity.

Survey System Second Division ID

The Survey System Second Division ID is a foreign key that points to a record in the Survey System Second Division, where information on the Survey System Second Division can be found.

Third Division Type

The Third Division Type describes classification of the third division.

Suggested Domain Values: Fractional Part, Lot, Tract, Parcel

Third Division Designator

The Survey System Third Division Designator is an alpha, numeric, or alpha-numeric designator used to identify the Third Division of the Survey System.

Third Division Description

The Survey System Third Division Description is a legal description text that describes the third division such as the northern 600 feet of a Parcel.

TRANSACTION AGENT

The Transaction Agent is any participant or party identified in a land record document or instrument.

ATTRIBUTES:

Transaction Agent ID

The Transaction Agent ID is a primary key that identifies each record in the Transaction Agent entity.

Agent ID

The Agent ID is a foreign key, which points to a record in the Agent entity, where information on the Agent can be found.

Transaction Document ID

The Transaction Document ID is a foreign key, which points to a record the Transaction Document entity where information on the Transaction Document can be found.

Right Percentage (Ownership)

(Formerly the Ownership Percentage) The Right Percentage expresses the proportion of the Transferred Rights that are attached to the listed Agent. This could also be the Ownership percentage.

Role

The Role is the capacity or function of the Agent in the Parcel Transaction.

Suggested Domain Values: Grantor, Grantee, Leaser, Lessee, Trustee, Mortgager, Mortgagee, Owner of Record, Recipient, Lender, Lendee

TRANSACTION DOCUMENT

The Transaction Document is the record of the transfer of rights in land. Transactions documents are often recorded in instruments, but it is not a requirement in the most parts of the United States that transactions be written. Both parties in the transfer of rights must be legal parties who are capable of both delivering and receiving the rights being passed.

ATTRIBUTES:

Transaction Document ID

The Transaction Document ID is a primary key that identifies each record in the Transaction Document entity.

Transaction Document ID Assigner

This is a designation for the agency, organization or jurisdiction that assigns and maintains the primary key. If possible, this designation should follow known naming standards, such as the Federal Information Processing System (FIPS) codes for jurisdictions.

Effective Date

The Effective Date is the date the Transaction Document becomes effective such as the date of approval or the date of recording.

Expiration Date

This is the date the Transaction Document expires.

Recorded Date

The Recorded Date is the calendar date shown on the Transaction Document at the time of recording or the filing date for documents that are filed. This is primarily important for states with race-notice or race requirements for land title document recording.

Recorded Time

The Recorded Time is the clock time interval shown on the Transaction Document. This is primarily important for states with race-notice or race requirements for land title document recording.

TRANSACTION DOCUMENT - CONTINUED

Ownership Type

The Ownership Type describes the characteristics by which the rights are held as described in the Transaction Document. Appendix 2 contains the informative appendix for the domain for Ownership Type.

Suggested Domain Values: Fee Simple Ownership, General Tenancy, Joint Tenancy, Life Estate, Tenancy in Common, Tenancy by the Entirety, Tenancy in Partnership, Tenancy from Period to Period, Tenant at Will, Timeshare Ownership, Owner after Life Estate, Undivided Interest, With Remainder

Term and Condition

Term and Condition contains the descriptions of any limitations or attachments to a Transaction Document such as a restrictive covenant or other limitation or stipulation.

Source ID

The Source ID is a foreign key that points to a record in the Source entity, where information on the Source can be found.

3.3 Bibliography and References

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3.4 Explanatory Notes

Explanatory Note 1: Outer Continental Shelf Leasing Maps and Official Protraction Diagrams

The Bureau of Land Management developed five unique NAD 27-based Outer Continental Shelf cadastres when the offshore program was administered by that Agency. The first three of these cadastres used to support oil, gas, sulphur, and salt leasing were Leasing Maps (the other two cadastres were Official Protraction Diagrams):

Cadastre 1 - Leasing Maps based on the Louisiana State Plane Coordinate System in a portion of the Central Gulf of Mexico.

Cadastre 2 - Leasing Maps based on the Texas State Plane Coordinate System in a portion of the Western Gulf of Mexico.

Cadastre 3 - Leasing Maps based on the California State Plane Coordinate System in the southern portion of the State adjoining the Channel Islands.

The Bureau of Land Management believed that since these three States had previously developed Leasing Maps defined by their unique State Plane Coordinate Systems, maintaining that system offshore in Federal waters would: (1) reduce confusion since some State leases were transferred to the Federal Government; (2) facilitate the resolution of legal issues associated with a common boundary; and (3) maintain the status quo for existing litigation. The State Plane Coordinate Systems had a major drawback, however, in they were designed for use onshore or nearshore, and not offshore on the Outer Continental Shelf. Thus, as the offshore program evolved and moved further from the shoreline, the limitations of State Plane Coordinate Systems became more apparent. For example, offshore of Louisiana the Bureau of Land Management had to use negative coordinates as they proceeded seaward. Further, the obligatory use of different State Plane Coordinate Systems for each coastal State compounded boundary computational problems.

To resolve these problems, the Bureau of Land Management developed two NAD 27 Official Protraction Diagram formats as their new offshore cadastre foundations. First, although both were adaptations of the military's metric-based UTM grid system, in the Gulf of Mexico, English linear measurements (feet) and areal measurements (acres) were used, and some zone boundaries were moved. In the Atlantic, the Pacific, and offshore of Alaska, they retained metric measurements (meters) and areal measurements (hectares) for the Official Protraction Diagrams. Currently, NAD 27 Leasing Maps are only used offshore of Texas and Louisiana.

The Official Protraction Diagram Designator is based on the United Nations International Map of the World alphanumeric numbering system. This worldwide system consists of main divisions subdivided into minor divisions. Each minor division is an Official Protraction Diagram.

A main division is four degrees of latitude by six degrees of longitude. Main divisions are identified by a two-letter designation, followed by a Universal Transfer Transverse Mercator Zone Number. The first letter indicates north or south of the Equator and the second letter indicates the distance from the equator. (As of the date of this document, all Official Protraction Diagrams published by the Minerals Management Service are north of the Equator.)

The main division contains twelve minor divisions of one degree of latitude by two degrees of longitude south of the 48-degree latitude. The two digit numbers 01 through 12 are the minor division identifiers and they must always be associated with a major division identifier such as NH18-12.

North of the 48th Latitude a main division contains eight minor divisions of one degree of latitude by three degrees of longitude. The two digit numbers 01 through 08 are the minor division identifiers and they must always be associated with a major division identifier such as NR05-03.

Explanatory Note 2: Public Land Survey System

Public Land Survey System Descriptions were originally begun in 1785 on public domain lands and the rules for its use were defined by the authority of the U.S. Government. Public Land Survey System Descriptions have since been extended, following similar rules, into non-public domain areas. Both the original government defined rectangular division of land and the subsequent extensions into non-public domain areas are included in Public Land Survey System Legal Area Descriptions.

The Public Land Survey System Origins and Survey Names are modeled here to reflect the survey systems as they exist in the records and on the ground. This modeling does not interfere with the Bureau of Land Management's PLSS Origin modeling.

Appendix 1 - Informative Appendix, Corner Classification Domain

<u>Domain</u>	<u>Description</u>
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ALIQUOT PART CORNER - A corner that establishes the limits of a division of a PLSS Section below the quarter division, such as a sixteenth corner or a government lot corner.

ANGLE POINT - A point of survey where the alinement or boundary deflects from a straight line. Any break in bearing on a survey can be considered an angle point. A corner set by a private survey to establish the limits of a certified survey lot, a land subdivision lot, or other parcel survey is generally an angle point.

AUXILIARY MEANDER CORNER - A corner established at a suitable point on the meander line of a lake lying entirely within a quarter-section or on the meander line of an island falling entirely within a section and which is found to be too small to subdivide. A line is run connecting the auxiliary meander corner to a regular corner on the section boundary (BLM 1973, paragraphs 121 and 122). Also established where lines other than regular subdivision of section lines intersect a meander line (BLM 1973, sample plat).

CENTER QUARTER SECTION CORNER - A special case of a quarter-corner. "To subdivide a section into quarter sections, run straight lines from established quarter-section corners to the opposite quarter-section corners. The point of intersection of the lines thus run will be the corner common to several quarter sections, or the legal center of section." (BLM 1973, paragraph 3-87). The above definition is sometimes termed the "federal center quarter-section corner" and applies to BLM cadastral surveys. Under state jurisdiction alternate methods of section subdivision may exist and a non-federal method center quarter-section corner determined. In some cases, such as completion surveys, it is possible for one section to have more than one center quarter-section corner.

INTERSECTION POINT - The point of intersection to mark the intersection of one or more independently surveyed lines.

CROSSING CLOSING CORNER - Crossing Closing Corner is a term used to describe a corner set where a township or section line intersects (crosses) the line of a surveyed mineral claim, forest homestead claim, small holding claim or the like. "A closing corner monument is not set at intersection with the line of a surveyed mineral claim, forest homestead claim, small holding claim or the like, unless required to provide an interval of monumentation of one half mile or less. In instances crossing closing corners may be needed for operational or litigation purposes, in which event they should be provided for in the special instructions." (BLM 1973, paragraph 3-71).

LOCATION CORNER - A term applied to a position determined and marked by the locator (claimant) of a mineral right to distinctly and clearly define the boundaries of a mining claim on the ground. This is not the same as a Location Monument.

LOCATION MONUMENT - "When a mineral survey is situated in a district where there are no corners of the public survey and no other monuments within 2 miles, a location monument is established." (BLM 1973, paragraph 10-32.) "A location monument is most frequently used as a reference for one or more mineral surveys. It may also be used in any situation where no corner of an existing survey is available to provide a satisfactory connection for an isolated special survey. The monument is generally established in a conspicuous position with good visibility from every direction. The corner of a special survey may be designated as a location monument if it meets this qualification." (BLM 1973, paragraph 4-18). This definition includes U.S. Mineral Monuments and U.S. Location Monuments.

MEANDER CORNER - A meander corner is established at every point where a Township line, section line, Land Grant, Homestead Entry Survey, Donation Land Claim or other survey intersects the bank of a navigable stream or other meanderable body of water. (BLM, 1973, paragraph 3-117.)

MILE CORNER OR MILE POST - "The mile corner of a State, Reservation or other grant boundary does not mark a point of a subdivision; it is a station along the line, however, long usage has given acceptance to the term." (BLM 1973, paragraph 5-4). The mile post includes Half Mile post corner categories.

POINT ON LINE - A stake or object a surveyor has placed on a line for convenience, such as for a backsight. Points on line are set in prominent places to facilitate identification of lines. Modern BLM cadastral surveys may refer to points on line as Witness Points. Points on Line may also be Line Trees.

QUARTER-CORNER - A corner at the extremity of a boundary of a PLSS quarter-section, not including the section corner. Written as 1/4 not one fourth.

SECTION CORNER - A corner at the extremity of a PLSS section boundary.

SPECIAL MEANDER CORNER - "A corner established at: 1) the intersection of a surveyed subdivision of section line and a meander line of a body of water or an island; 2) the intersection of a computed center line of a section and a meander line of an island over 50 acres in area which is located entirely within a section." (BLM 1973, paragraphs 121 and 122).

SUBDIVISION OF SECTION CORNER - The BLM 1973 Manual distinguishes between one sixteenth section subdivision corners and minor subdivision corners, which are 1/16 and smaller subdivision corners. This difference is recognized, but for the purposes of definition a subdivision corner is any corner which defines a one sixteenth or smaller division of a section and is not a section, quarter-section, or center quarter-section corner. In some cases, subdivision corners may be corners of government lots, however, all corners of government lots may or may not be section subdivision corners.

TOWNSHIP CORNER - A corner at the extremity of a PLSS township boundary. Normally a PLSS township has four township corners. This does not include section, quarter-section or section subdivision corners which are on a PLSS township boundary.

WITNESS POINT - "A witness point is a monumented station on a line of the survey that is used to perpetuate an important location more or less remote from and without special relation to any regular corner." (BLM 1973, paragraph 4-17).

Domain Qualifiers

Description

CLOSING - "Closing corners are intended to be established where a closing line intersects a boundary already fixed in position. While the closing corner thereafter controls the direction of the closing line, a failure to place it at the true intersection does not alter the position of the line closed upon..." (BLM 1973, paragraph 3-73).

WITNESS - "A witness point is a monumented station on a line of the survey that is used to perpetuate an important location more or less remote from and without special relation to any regular corner." (BLM 1973, paragraph 4-17).

AMENDED - There are two primary applications of amended monuments stated in the BLM Manual of Instruction. In general a monument whose position no longer marks the true position for the corner. The monument is marked A.M. "If it is known that a mineral survey, homestead entry, small holding claim, right of way, reservoir, or other survey has been connected with a corner of an exterior subject to rectification, the fact is stated in the special instruction. In such a case the marks **A.M. (signifying amended monument)** are added to the original corner monument and the old corner is connected by course and distance to the new." (BLM 1973, paragraph 3-36.) "A recovered closing corner not actually located on the line that was closed upon will determine the direction of the closing line, but not its legal terminus. The correct position is at the true point of intersection of the two lines. The new monument in those cases where it is required will always be placed at the true point of intersection. An

off-line monument in those cases where a new monument is required will be marked **A.M. (for amended monument)** and will be connected by course and distance." (BLM 1973, paragraphs 5-41 and 8-16(6).)

AUXILIARY - A corner established at a suitable point on the meander line of a lake lying entirely within a quarter-section or on the meander line of an island falling entirely within a section and which is found to be too small to subdivide. A line is run connecting the auxiliary meander corner to a regular corner on the section boundary (BLM 1973, paragraphs 121 and 122). Also established where lines other than regular subdivision of section lines intersect a meander line (BLM 1973, sample plat).

Appendix 2 - Informative Annex, Ownership Type Domain

<u>Domain</u>	<u>Description</u>
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FEE SIMPLE OWNERSHIP - Absolute. A fee simple absolute is an estate limited absolutely to a man or woman and his or her heirs and assigns forever without limitation or condition.

GENERAL TENANCY - A tenancy which is not fixed and made certain in point of duration by the agreement of the parties.

JOINT TENANCY - An estate in fee simple, fee tail, for life, for years, or at will arising by the purchase or grant to two or more persons. Joint tenants have one and the same interest, accruing by one and the same time, and held by one and the same undivided possession. The primary incident of joint tenancy is survivorship, by which the entire tenancy on the decease of any joint tenant remains to the survivors, and at length to the last survivor.

LIFE ESTATE - An estate whose duration is limited to the life of the party holding it or the life of some other person. A legal arrangement whereby the beneficiary is entitled to estate for his or her life. Upon the death of the life tenant the property will go to the holder of the remainder interest or to the grantor by reversion.

TENANCY IN COMMON - A form of ownership whereby each tenant or right holder holds an undivided interest in property. Unlike a joint tenancy or a tenancy by the entirety, the interest of a tenant in common does not terminate upon his or her death. The percentage of Tenancy in Common interests pass on in the estate.

TENANCY BY THE ENTIRETY - A tenancy which is created between husband and wife and by which together they hold title to the whole with right of survivorship so that upon death of either, the other takes whole to the exclusion of the deceased heirs.

TENANCY IN PARTNERSHIP - Real Estate held by partnership and governed under the Uniform Partnership Act.

TENANCY FROM PERIOD-TO-PERIOD - A periodic tenancy which runs from month to month, year-to-year or other specified period of time. A Lease is an example of Tenancy from Period-to-Period.

TENANT AT WILL - One who holds the possession of rights by permission of the right grantor but without fixed term.

TIMESHARE OWNERSHIP - Timeshare ownership is a condominium ownership that extends for a specified time period as well for a specified space. This is a special case of a tenancy in common.

OWNER AFTER LIFE ESTATE - The tenant or right holder who holds the remainder or reversion rights to a life estate.

UNDIVIDED INTEREST - An undivided right or title, or title to an undivided portion of an estate, is that owned by two or more tenants in common or by joint tenants before partition. Held by the same title by two or more persons, whether their rights are equal as to value or quantity or unequal.

WITH REMAINDER - The remnant of an estate in land, depending upon a particular prior estate created at the same time and by the same instrument, and limited to arise immediately on the determination of that estate, and not in abridgement of it. A future interest created in some person other than grantor or transferor.

Appendix 3 - Informative Appendix, Survey System Domain

Domain

Description

ASSESSOR PLAT - An Assessor Plat is a survey and description of one or more areas of land owned by two or more persons in severalty that is ordered to be done by a governing body with property taxation authority for the purpose of making sufficient and accurate determination of assessment, taxation, or tax title. The rules for Assessor Plats are defined by State law.

Business Rule:

1. This domain value requires that State and County be specified.

CEMETERY - A Cemetery divides the land into lots and rights-of-way. State law controls the rules for Cemetery Plats, which describe the extent of lots and rights-of-way.

Business Rule:

1. This domain value requires that State and County be specified.

CONDOMINIUM - A Condominium Plat is a map and description of rights to land or space that are defined by State law and contain allocated interests, common elements, and independent use units. State law defines the laws governing the creation, survey, and definition of condominiums.

Business Rule:

1. This domain value requires that State and County be specified.

FARM LOT - A Farm Lot is an elongated lot that occurs outside the Public Land Survey System on lands that were occupied prior to survey. These lots are generally elongated and generally run perpendicular to a body of water, such as a river.

Business Rule:

1. This domain value requires that State and County be specified.
2. Farm Lots are identified by a number.

FRENCH LONG LOT - A French Long Lot is an elongated lot that occurs outside the Public Land Survey System on lands that were occupied prior to survey and established by the French explorers and traders. These lots are generally elongated and generally run perpendicular to a body of water, such as a river.

Business Rule:

1. This domain value requires that State and County be specified.

2. French Long Lots are identified by a number.

GRANT OF LAND - Grants of Land are areas of land to which title has been confirmed or conferred to any person or organization by the U.S. for a particular reason or purpose.

HOMESTEAD ENTRY - A Homestead Entry is an entry under the U.S. land laws for the purpose of acquiring title to a portion of the public domain under the Homestead Laws. A Homestead Entry Survey is a metes and bounds survey entered under the Act of June 11, 1906 as amended that describes the Homestead Entry..

Business Rule:

1. This domain value requires that State be specified.
2. Homestead Entry Surveys are identified by a number.

INDIAN ALLOTMENT - An Indian Allotment is an allocation of a parcel of public lands or Indian Reservation lands to a Native American for his or her individual use. Indian Allotments are identified by either a name or a number.

Business Rule:

1. This domain value requires that State be specified.

LAND GRANT - A Land Grant is an areas of land to which title was conferred by a predecessor government and confirmed by the U.S. Government after the territory in which it is situated was acquired by the U.S.

Business Rule:

1. This domain value requires that State be specified.

MINERAL SURVEY - A Mineral Survey is a survey of one or more lode claims, placer claims, or mill sites with all their notes and plats. This type of survey is executed by a U.S. Mineral Surveyor for the purposes of marking the legal boundaries of mining claims on the public domain. Mineral Surveys are identified by number. Mineral surveys may be subdivided into lodes, placers or mill sites.

Business Rule:

1. This domain value requires that State be specified.

PLAT OF SURVEY - A Plat of Survey is a document prepared by a registered land survey for the purposes of clarifying property boundaries, generating a legal description, or establishing the location of improvements or topographical characteristics.

Business Rule:

1. This domain value requires that State be specified.

SEQUENCE CONVEYANCE - Sequence conveyances are those written deeds in which junior and senior rights exist between adjoining parcels. In general sequential conveyances come into being because of a lapse of time between successive conveyance instruments. Another way these arise is from the sequential partition of large land holdings into separate parts. (Brown, 1969)

SMALL HOLDING CLAIM - A Small Holding Claim is an entry in which the entryman and his or her predecessors of interest maintained continuous, adverse, actual, bona fide possession of public lands for at least 20 years prior to BLM Cadastral Survey of the lands involved and is covered by Acts of March 3, 1891 and June 15, 1922 as amended. Small Holding Claims are identified by number.

Business Rule:

1. This domain value requires that State be specified.

SMALL TRACTS ACT - A Small Tracts Act Survey is a parcel of land surveyed under the authority of the Small Tracts Act, Public Law 97-465, January 12, 1983. It applies to parcels within the National Forest System which may be sold, exchanged, or interchanged. The acreage of the parcels may be: (1) 40 acres or less when interspersed with adjacent lands not in federal ownership, (2) 10 acres or less when encroached upon by color of title improvements, or (3) Rights of way, reserved or acquired, which are no longer needed by the federal government and are surrounded by lands not owned by the federal government.

Business Rule:

1. This domain value requires that State and PLSS Township be specified.

SUBDIVISION - A Subdivision is a unit of land defined by a survey which is governed by State subdivision law or local ordinance. A subdivision plat is a simultaneous conveyance where all divisions of land within the subdivision plat have equal standing with each other.

Business Rule:

1. This domain value requires that State and County be specified.

SURVEY - A Survey is a measurement of the land recorded on a survey, map, that describes areas of land and is completed by a State certified Registered Land Surveyor and filed according to State laws.

Business Rule:

1. This domain value requires that State and County be specified.

TEXAS LAND GRANT - A Texas Land Grant is grant of land made to a citizen of the nation of Texas prior to Texas Statehood. It is governed by the laws of the State of Texas.

Business Rule:

1. This domain value requires that State be specified as TX.

TOWNSITE - A Townsite is an area which has been segregated for urban development, often subdivided into blocks which are further subdivided into lots. One type of townsite is a survey of street and lot boundaries executed to segregate from public lands an area of land qualifying under the townsite laws. Another type of Townsite may be a city subdivision.

Business Rule:

1. This domain value requires that State be specified.

UNITED STATES SURVEY - A United States Survey is a metes and bounds survey executed to comply with one of various regulations for entry of public lands in Alaska. These surveys are identified by a number or a letter-number designation.

Business Rule:

1. This domain value requires that State be specified.

Appendix 4 - Informative Appendix, Source Type Domain

<u>Domain</u>	Description
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ABRIDGEMENT - A summary of another and larger work, wherein the principal ideas of the larger work are summarily contained.

ABRIDGEMENT OF FINAL JUDGEMENT - An abridgement is a condensation or reduction. An abridgement to final judgement is a reduction of a final judgement.

ABSTRACT - A summary that comprises or concentrates in itself the essential qualities of a larger thing or of several things. A lesser quantity containing the virtue and force of a greater quantity; an abridgement.

ABSTRACT OF TITLE - A condensed history of the title to land, consisting of a synopsis or summary of the material or operative portion of all the conveyances, of whatever kind or nature, which in any manner affect said land, or any estate or interest therein, together with a statement of all liens, charges, or liabilities to which the same may be subject, and of which it is in any way material for purchasers to be apprised. An epitome of the record evidence of title, including maps, plats, and other aids.

AERIAL PHOTOGRAPH - An image taken by an airborne unit. These may be captured on film or disk and may be one of a series of photographs taken for stereoplottling and mapping or may be a stand alone image.

AFFIDAVIT - A written or printed declaration or statement of facts, made voluntarily, and confirmed by the oath or affirmation of the party making it, taken before a person having authority to administer such oath or affirmation.

AGREEMENT - The writing or instrument evidencing the intention between two or more parties with respect to the effect upon their relative rights and duties of certain past or future facts or performances. The consent of two or more parties concurring respecting the transmission of some property, right, or benefits, with the view of contracting a mutual obligation. Examples of agreements include:

Condominium Agreement - An agreement regarding individual ownership units, generally in a multi-family structure, based on a legal description of the airspace the unit actually occupies, plus an undivided interest in the ownership of the common elements.

Holding Tank Agreement - The property owner agrees to adhere to a maintenance schedule for waste water holding tank in order to obtain a permit from the county to allow its construction or continued use.

Non-Point Agreement - An agreement between a landowner and an agency that certain conservation installations that were partially funded by the state will be maintained.

Security Agreement - An agreement which creates or provides for a security interest between the debtor and a secured party.

Trust Agreement - An agreement between two or more parties with respect to the effect upon their relative rights and duties pertaining to the legal entity created by a grantor for the benefit of designated beneficiaries.

Septic System Agreement - The property owner agrees to maintain a private septic system in order to obtain a permit from the county to allow its construction.

Well Agreement - Two or more property owners agree to maintain a private well serving all the properties, but the well is located on only one of the properties.

ANNEXATION - The act of attaching, adding, joining, or uniting one thing to another; generally spoken of the connection of a smaller or subordinate thing with a larger or principal thing. Term is usually applied with respect to land or fixtures as: the acquisition of territory or land by a nation, state or municipality; the legal incorporation of a town or city into another town or city.

AMENDED PROTRACTION DIAGRAM - An existing protraction diagram which has been amended under the standards of BLM IM-WO-93-353.

ARTICLES OF INCORPORATION - The basic instrument filed with the appropriate governmental agency on the incorporation of a business. These are sometimes called the certificate of incorporation.

ASSESSMENT - A document stating a valuation or a determination as to the value of property. It is often used in connection with assessing property taxes or levying of property taxes.

ASSIGNMENT - A transfer or making over to another of the whole of any property, real or personal, in possession or action, or of any estate or right therein. The transfer by a party of all of its rights to some kind of property, usually intangible property such as rights in a lease, mortgage, agreement of sale or a partnership. Tangible property is more often transferred by possession and by instruments conveying title such as a deed. Two examples are described below.

Assignment of Land Contract - An assignment is a transfer or making over to another of the whole of any property, real or personal, in possession or in action, or of any estate or right therein. An Assignment of Land Contract transfers an existing Land Contract to another party.

Assignment of Rent - An assignment is a transfer or making over to another of the whole of any property, real or personal, in possession or in action, or of any estate or right therein. An Assignment of Rent transfers the rental payments from one party to another.

Assignment of Mortgage - An assignment is a transfer or making over to another of the whole of any property, real or personal, in possession or in action, or of any estate or right therein. An Assignment of Mortgage transfers the mortgage payments from one party to another.

AWARD OF DAMAGES - A written decision to monetarily compensate a party who has suffered loss due to the action or inaction of another, as determined by a deciding authority.

BOUNDARIES - Every separation, natural or artificial, which marks the confines or line of division of two contiguous properties.

BURIAL SITE - Documents that locate human burial mounds and plots not included in a cemetery plat.

BYLAWS - A document enumerating the regulations, ordinances, rules or laws adopted by an association or corporation or the like for its internal governance. Bylaws define the rights and obligations of various officers, persons or groups within the corporate structure and provide rules for routine matters such as calling meetings and the like.

CERTIFICATE - An obligation of the government entitling owner to secure designated quantity of land by following the requirements of law. It contains a description of the land as it appears on the register and the name and address of the proprietor and is prima facie evidence of the truth of the matters therein set forth.

CERTIFIED SURVEY - A Certified Survey is a property Survey done according to the standards of Administrative Code and recorded at the Register of Deeds.

CONTRACT - An agreement between two or more persons that creates an obligation to do or not to do a particular thing. The essential components of a contract are: competent parties, a subject matter, legal consideration, mutuality of agreement, and mutuality of obligation. There are many classifications of contracts depending on the elements in them that brought to prominence.

COVENANTS & RESTRICTIONS - A contract or provision in a deed between grantor and grantee which restricts or limits grantee's use and occupancy of land; generally, purpose behind restrictions and covenants is to maintain or enhance value of lands adjacent to one another by controlling nature and use of surrounding lands.

DECLARATION - A document by the owner of property which is recorded in order to establish a legal order upon the property, such as a condominium (by a declaration of condominium or master deed), a system of cross-easements (by a declaration of easements) or a homeowners association (by declaration of covenants, restrictions and easements).

DEED - A conveyance of realty; a writing signed by grantor, whereby title to realty is transferred from one to another. A written instrument, signed, and delivered, by which one person conveys land, tenements, or hereditaments to another. Examples of deeds include:

Administrator's Deed - A deed signed by a person appointed by the court to administer the assets and liabilities of a decedent, as grantor.

Condominium Deed - A deed by which one person conveys to another absolute individual ownership units, generally in a multi-family structure, based on a legal description of the airspace the unit actually occupies, plus an undivided interest in the ownership of the common elements, which are owned jointly with other condominium unit owners.

Executor's Deed - A deed signed by a person appointed by a testator to administer the disposition of property of a decedent, as grantor.

Guardian's Deed - A deed signed by a person lawfully invested with the power, and charged with the duty, of taking care of the person and managing the property and rights of another person who, for defect of age, understanding, or self-control, is considered incapable of administering his own affairs.

Personal Representative's Deed - A deed signed by a person who manages affairs of another because of incapacity or death such as an executor or an administrator.

Quitclaim Deed - A deed signed by grantor, whereby title to realty is transferred from one to another operating by way or release; that is, intended to pass any title, interest, or claim which the grantor may have in the premises, but not professing that such title is valid, nor containing any warranty or covenants for title. The federal government conveys land to others with quitclaim deed. Examples of quit claim deeds include:

Government Land Patent - A deed issued by the federal government for the conveyance of some portion of the public domain. Federal patents are a type of quit claim deed.

Marshall's Deed - A document giving ownership rights in property to a buyer at a marshall's sale (i.e. a sale held by a marshall to pay a court judgment against the owner of the property). Deed given at marshall's sale in foreclosure of a mortgage. The giving of said deed begins a statutory redemption period. In some states or locales referred to as a "sheriff's deed."

Reversionary Right Quitclaim Deed - A quitclaim deed providing that a future interest under which a grantor retains a present right in the property being conveyed.

Sheriff's Deed - A document giving ownership rights in property to a buyer at a sheriff's sale (i.e. a sale held by a sheriff to pay a court judgment against the owner of the property). Deed given at sheriff's sale in foreclosure of a mortgage. The giving of said deed begins a statutory redemption period.

Receiver's Deed - A deed signed by a person who has been appointed by a court for the purpose of preserving property of a debtor pending an action against such debtor.

Tax Deed - The deed given upon a sale of real property made for non-payment of taxes. The deed whereby the officer of the law undertakes to convey the title of the property to the purchaser at the tax sale. A proof of ownership of land given to the purchaser by the government after the land has been taken from another person by the government and sold for failure to pay taxes.

Timber Deed - A deed conveying the right to cut and remove timber on the demised premises.

Trustee's Deed - A deed that establishes a trust and is generally an instrument that conveys legal title to property to a trustee and states the authority and conditions that bind the trustee in dealing with the property held in trust.

Warranty Deed - A deed signed by grantor, whereby grantor warrants good, clear title. A deed which explicitly contains covenants concerning the quality of title it conveys. In some states, statutes impute warranties or covenants from the use of specific words, such as grant. The usual covenants of title are warranties of seisin, quiet enjoyment, right to convey, freedom from encumbrances and defense of title as to all claims.

DISTRICT - One of the territorial areas into which an entire state or country, county, municipality or other political subdivision is divided, for judicial, political, electoral, or administrative purposes.

EASEMENT - A document describing the non-possessing interest held by one person in the land of another whereby the first person is accorded partial use of such land for a specific purpose. An example is described below.

Driveway Easement - A document describing the right of ingress and egress to a single residential or commercial property. It is usually an easement across public land, such as a Department of Transportation right of way.

EXECUTIVE DIRECTIVE - A notice of performance, conduct, or regulation that is issued by the executive branch for the purposes of implementing public policy as established by the executive branch.

EXECUTIVE ORDER - An order or regulation issued by the President or some other administrative authority under his direction for the purpose of interpreting, implementing, or giving administrative effect to a provision of the Constitution or some law or treaty. To have effect such orders must be published in the Federal Register.

EXECUTIVE OTHER - Any other executive branch or its agencies that produces a document that affects rights and interest in land or the spatial extent of those rights and interests.

IBLA - The Interior Board of Land Appeals (IBLA) exercises jurisdiction over cases involving appeals from decisions rendered by departmental officials relating to all survey, minerals, and lands cases across all public domain lands and disposition of mineral resources in certain acquired lands and in the submerged lands of Outer Continental Shelf.

INTERIM CONVEYANCE - An Interim Conveyance is a document issued by the United States to the party entitled to the lands which conveys to and vests in the recipient the exact same right, title and interest in and to lands as though a US Patent were issued, subject to valid existing rights and such conditions and reservations authorized by law as are imposed, pending survey. ANILCA Section 1410.

JUDGMENT - The official and authentic decision of a court of justice upon the respective rights and claims of parties to an action or suit therein litigated and submitted to its determination. Examples of judgments include:

Divorce Judgment - The decision of the court resolving the dispute and determining the rights and obligations of the parties to the legal separation of man and wife.

Final Judgment - The decision of the court resolving a dispute and determining the rights and obligations of the parties which leaves nothing open to further dispute and which sets at rest cause of action between parties.

Revised Final Judgment - A review and re-examination of an existing final judgment.

JUDICIAL ORDER - An order that involves the exercise of judicial discretion and affects final result and litigation. This document type includes condemnations and decrees of judgement.

JUDICIAL SALE - - A sale conducted under a judgement, order, or supervision of a court as in sale under a petition for partition of real estate.

LAND CONTRACT - A contract for the purchase and sale of land upon execution of which title is transferred. Term commonly refers to an installment contract for the sale of land whereby purchaser (vendee) receives the deed from the owner (vendor) upon payment of final installment. The vendor/seller finances the sale for the buyer and retains legal title to the property (deed) as security for payment of contract price. May also be called "contract for deed," "installment land contract," or "land sale contract."

LAND PATENT – A muniment (documentary evidence of title) of title issues by a government or state for the conveyance of some portion of the public domain.

LEASE - Any agreement which gives rise to relationship of landlord and tenant or lessor and lessee. It is a contract for exclusive possession of lands or tenements for determinate period. Leases are often classified according to determinate period.

LEGISLATION FEDERAL - The result of the act of passing laws by the Congress.

LEGISLATION LOCAL - The act of giving or enacting laws by a local body. The enactment of laws by a democratic body in a local jurisdiction.

LEGISLATION STATE - The result of passing and signing into law laws by a state. The enactment of laws by a democratic body in a state.

LIEN - A claim, encumbrance, or charge on property for payment of some debt, obligation or duty. Qualified right of property which a creditor has in or over specific property of his debtor, as security for the debt or charge or for performance of some act. Right or claim against some interest in property created by law as an incident of contract. Right to enforce charge upon property of another for payment or satisfaction of debt or claim. Right to retain property for payment of debt or demand.

Security for a debt, duty or other obligation. A change against or interest in property to secure payment of a debt or performance of an obligation. Examples of liens include:

Construction Lien - A lien on property for payment of some debt, obligation or duty that arises by law and attaches to real estate to secure payment of a party who improved the property through the rendering of labor or other services or the furnishing of materials or other supplies. Another name for this lien is mechanics' lien.

Federal Tax Lien - A lien on property for payment of some debt, obligation or duty owed in regards to the repayment of a Federal Tax obligation.

LIS PENDENS - A notice of the pendency of an action involving real estate recorded in the registry of deeds. It is a notice that there is a lien or other title limiting action pending against the real estate.

MONUMENT TIE SHEET - A diagram describing the placement and accessories of a corner, usually a corner of the Public Land Survey System. The form, content, and filing of these sheets is often governed by state law or local ordinance.

MORTGAGE - A document describing a loan or interest held by a party against the real estate of another.

MORTGAGE RELEASE - A document indicating that a mortgage has been satisfied.

OPTION - A contract made for consideration to keep an offer open for prescribed period; a right, which acts as a continuing offer, given for consideration, to purchase or lease property at an agreed upon price and terms, within a specified time. An option is an agreement which given the optionee the power to accept an offer for a limited time. An option to purchase or sell is not a contract to purchase or sell, as optionee has the right to accept or to reject the offer, in accordance with its terms, and is not bound.

ORDER - A document containing the direction of a court or judge made or entered in writing, and not included in a judgment, which determines some point or directs some step in the proceedings. An Example of an order includes:

Judicial Order - The direction of a judge in determining some point or directing some step in a proceeding.

ORDINANCE - A rule established by authority; a permanent rule of action; a law or statute. In its most common meaning, the term is used to designate the enactments of the legislative body of a municipal corporation. It designates local law of a municipal corporation, duly enacted by the proper

authorities, prescribing general, uniform and permanent rules of conduct relating to the corporate affairs of the municipality. An ordinance is the equivalent of the municipal statute, passed by the city council, or equivalent body and governing matters not already covered by federal or state law. Ordinances commonly govern zoning, building, safety, etc. matters of municipality.

OTHER MAP - - Any other map of survey that contains information about real property rights, transfer, or monumentation.

PARTIAL RELEASE - A writing or an oral statement manifesting an intention to discharge another from a portion of an existing or asserted duty; a clause in blanket mortgage directing mortgagee to release specified parcels from lien upon payment of certain sum.

PATENT – see Land Patent

PLAT - A map of a specific land area such as a town, section, or subdivision showing the location and boundaries of individual parcels of land subdivided into lots, with streets, alleys, easements, etc., usually drawn to a scale. Examples of plats include:

Condominium Plat - A map of a single real property parcel in which individual ownership units (based on a legal description of the airspace the unit actually occupies and showing the location and boundaries of individual units including easements, etc.), as well as common areas of the building and ground jointly owned by the individual owners as common elements.

Plat of Survey - A document generated by a land surveyor for the purposes of fixing the boundaries of property. Once a plat of survey is approved or stamped legal descriptions are defined by referring to the given map and its accompanying notes.

PROTRACTION DIAGRAM - "A diagram representing the plan for the extension of the rectangular system of surveys over unsurveyed public lands, based upon the computed values for the corner positions, is termed a protraction diagram." (BLM, 1973, paragraph 2-14).

PUBLIC LAW NOTICE - Public law is the branch of law concerned with the state in its political or sovereign capacity, including constitutional and administrative law, and with the definition, regulation, and enforcement of rights in cases where the state is regarded as the subject of the right or object of duty. Notices of public law that come from the executive branch are considered executive public law notices. This includes the agencies of the executive branch which are represented by the cabinet secretaries. These notices do not have the effect of law.

SATELLITE IMAGE - Digital data captured by an orbiting body over a known sets of wavelengths.

SATISFACTION - The discharge of an obligation by paying a party which is due to him (as on a mortgage, lien, note, or contract), or what is awarded to him by the judgment of a court or otherwise.

SPECIAL ASSESSMENT - A valuation in the nature of a tax levied upon property according to benefits conferred on the property, intended to offset cost of local improvements such as sewer, water and streets, which is selectively imposed on beneficiaries. It differs from a general tax in that it is levied for a specific purpose and in an amount proportioned to the direct benefit of the property assessed.

STIPULATION - A material condition, requirement, or article in an agreement.

SURVEY NOTES - The information contained in field notes from field observations.

TERMINATION - An ending, usually before the end of the anticipated term of the lease or contract, which termination may be by mutual agreement or may be by exercise of one party of one of his remedies due to the default of the other party. Under U.C.C., "termination" means legally ending a contract without its being broken by either side.

TREATY - International treaties or agreements are arrangements of a contractual character between different countries or organizations of states (foreign) creating legal rights and obligations between the parties. In the United States the advice and consent of the Senate is required for an international agreement to be a treaty.

TRUST - A legal entity created by a grantor for the benefit of designated beneficiaries under the laws of the state and the valid trust instrument.

U.C.C. - Uniform Commercial Code. One of the Uniform Laws drafted by the National Conference of Commissioners on Uniform State Laws and the American Law Institute governing commercial transactions (including sales and leasing of goods, transfer of funds, commercial paper, bank deposits and collections, letters of credit, bulk transfers, warehouse receipts, bills of lading, investment securities, and secured transactions). The U.C.C. has been adopted in whole or substantially by all states. An example of a U.C.C. document includes:

U.C.C. Financing Statement - Under the Uniform Commercial Code, a financing statement is used under Article 9 to reflect a public record that there is a security interest or claim to the goods in question to secure a debt. The financing statement is filed by the security holder with the Secretary of State, or similar public body, and as such becomes public record. When the document is filed with the appropriate government agency, all potential lenders and third parties are put on constructive notice of the security interest.

VARIANCE - A document evidencing permission to depart from the literal requirements of a zoning ordinance.

WAIVER - A document wherein the intentional or voluntary relinquishment of a known right is made, or such conduct as warrants an inference of the relinquishment of such right, or when one dispenses with the performance of something he is entitled to exact or when one in possession of any right, whether conferred by law or by contract, with full knowledge of the material facts, does or forbears to do something the doing of which or the failure of forbearance to do which is inconsistent with the right, or his intention to rely upon it..

Appendix 5 - Informative Appendix, References for Marine Cadastral Boundaries

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